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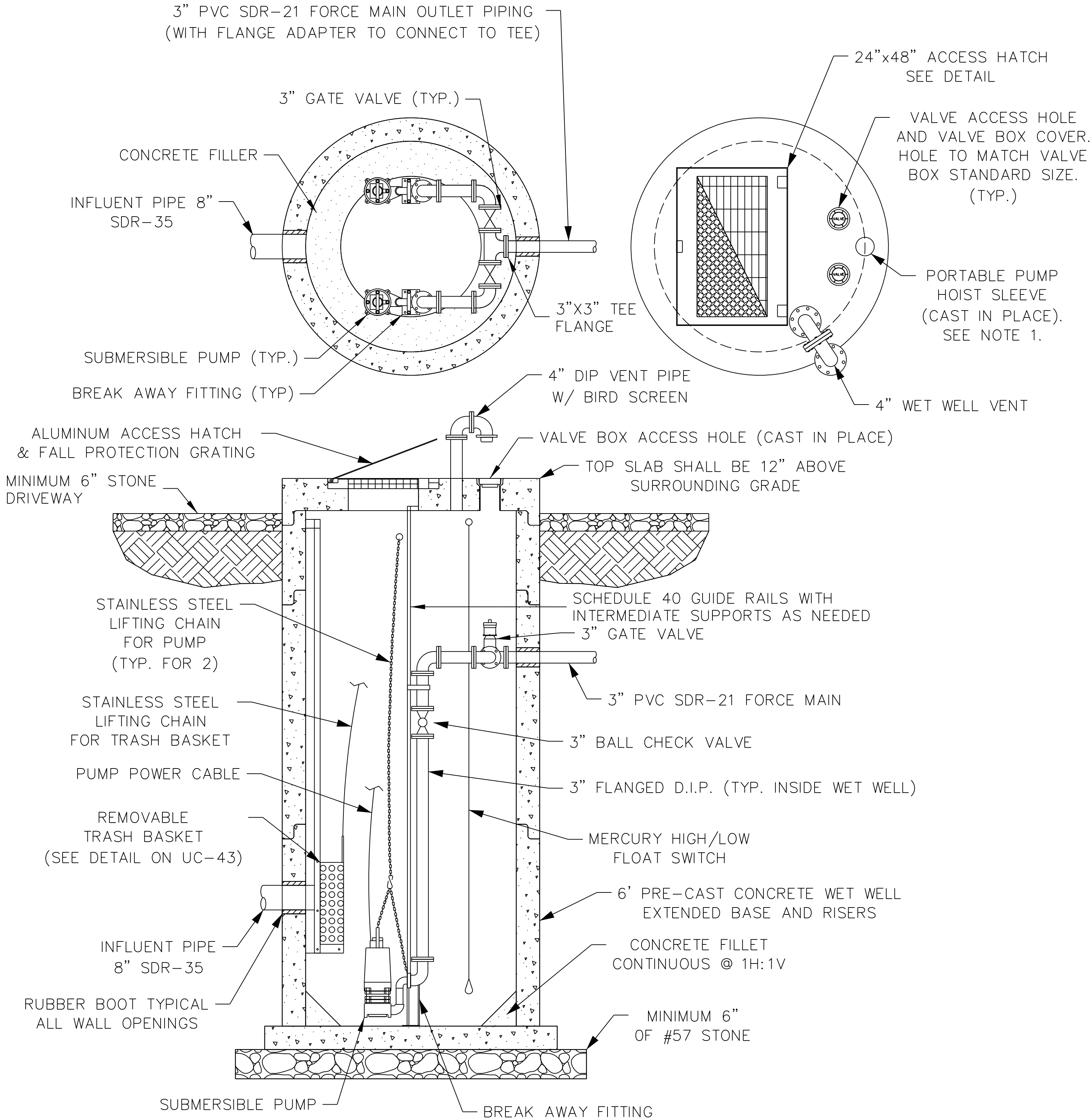
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5/14/99

NOTES:

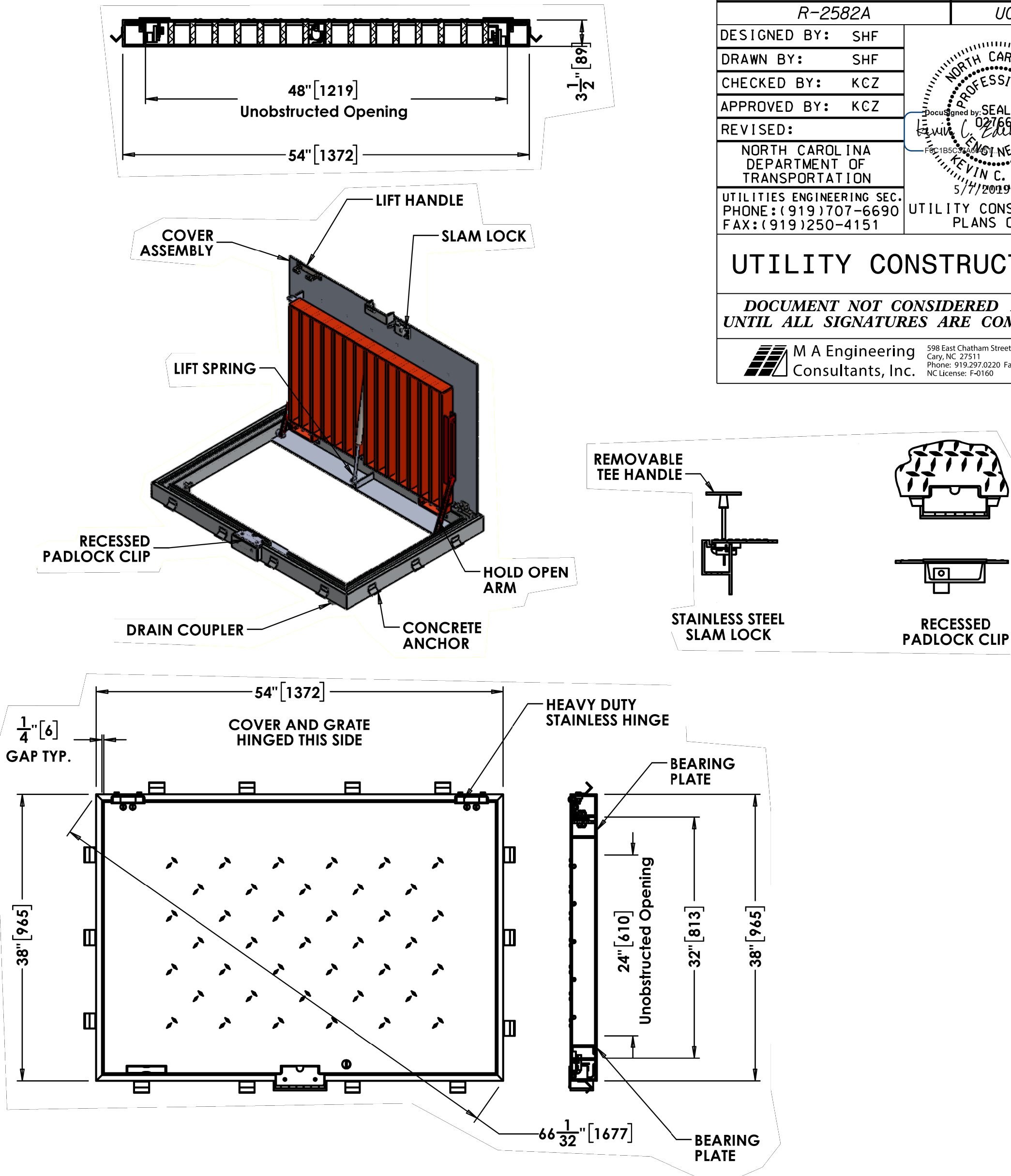
1. REFER TO SPECIAL PROVISIONS FOR **SPECIAL PAY ITEM** SANITARY SEWER PUMP STATION (SANFILIPPO).
2. EXISTING SANFILIPPO PUMP STATION SHALL BE REMOVED AFTER NEW PUMP STATION HAS BEEN FULLY TESTED, ACCEPTED BY UTILITY OWNER, AND PLACED INTO SERVICE.
3. PUMP STATION SHALL MEET ALL STATE MINIMUM DESIGN REQUIREMENTS.
4. WET WELL SHALL BE EPOXY COATED (80 MILS).
5. PUMPS SHALL BE BARNES MODEL NO. XSGV3032L OR APPROVED EQUAL.
6. BREAK AWAY FITTING SHALL BE BARNES MODEL NO. BAFEZ-2x3 OR APPROVED EQUAL.
7. 3" GATE VALVES SHALL BE PROVIDED WITH PIPE SUPPORT (NOT SHOWN).

WET WELL AND CONTROL ELEVATIONS	
TOP SLAB:	131.00
GROUND:	130.00
FORCE MAIN INVERT:	125.78
GRAVITY INVERT:	118.66
HIGH WATER ALARM:	117.66
LAG PUMP ON:	117.16
LEAD PUMP ON:	116.83
PUMPS OFF:	116.16
LOW WATER ALARM:	116.08
WET WELL BOTTOM:	115.33



SANFILIPPO PUMP STATION PLAN AND PROFILE

SCALE: 1"=2'



SANFILIPPO ACCESS HATCH

NOT TO SCALE

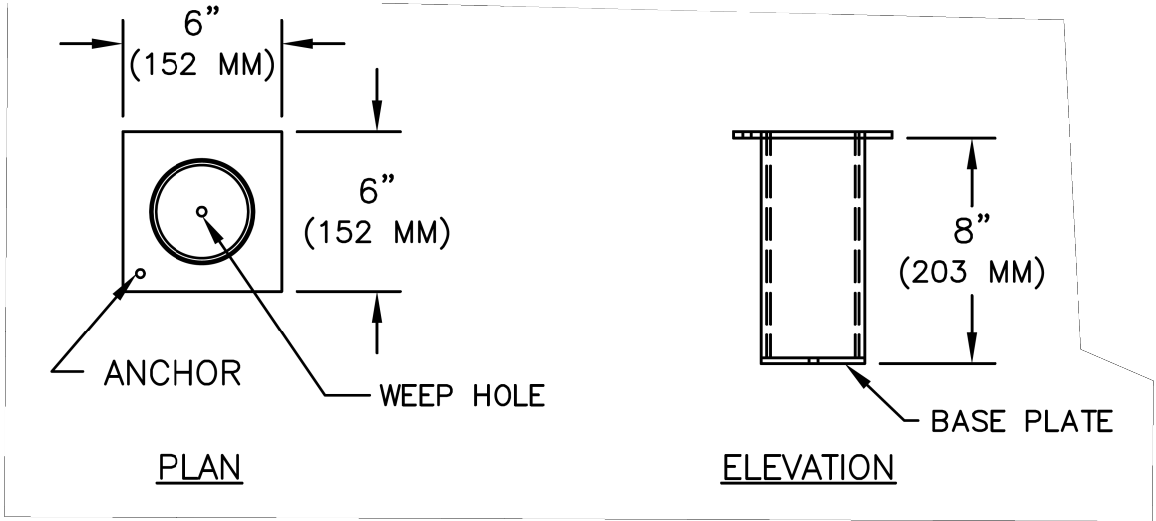
NOTES:

1. MATERIAL SHALL BE 6061-T6 ALUMINUM FOR BARS, ANGLES AND EXTRUSIONS, 1/4" DIAMOND PLATE SHALL BE 5086 ALUMINUM.
2. UNIT DESIGNED HEAVY DUTY, FOR 16,000 LBS + 30% IMPACT H-20 WHEEL LOADS, OVER A 10" X 20" CONTACT AREA. FRAMES AND BEARING PLATE MUST BE CAST INTO AND SUPPORTED BY CONCRETE DESIGNED FOR H-20 WHEEL LOADS.
3. UNIT NOT SUITABLE FOR WHEEL LINE PLACEMENT.
4. UNIT SUPPLIED WITH A HEAVY DUTY PNEU-SPRING, FOR EASE OF OPERATION WHEN OPENING GRATE. GRATE SHALL BE COUNTERBALANCED, SO ONE PERSON CAN EASILY OPEN THE SAFETY GRATE.
5. FRAME SHALL BE OF EXTRUDED ALUMINUM. A DOVETAIL GROOVE SHALL BE EXTRUDED INTO THE SEAT OF THE FRAME FOR A 1/8" SILICONE GASKET.
6. EACH HATCH SHALL BE EQUIPPED WITH A STAINLESS STEEL HOLD OPEN ARM. DOOR SHALL LOCK OPEN IN THE 90 DEGREE POSITION. HOLD OPEN ARM SHALL BE FASTENED TO THE FRAME WITH A 1/2" GRADE 316 STAINLESS STEEL BOLT.
7. HINGES SHALL BE OF HEAVY DUTY DESIGN. MATERIAL SHALL BE GRADE 316 STAINLESS STEEL. EACH HINGE SHALL HAVE A GRADE 316 STAINLESS STEEL, 3/8" DIAMETER HINGE PIN. HINGE SHALL BE FASTENED TO THE CHANNEL FRAME AND DIAMOND PLATE WITH GRADE 316 STAINLESS STEEL BOLTS AND NY-LOCK NUT.
8. ALUMINUM SHALL BE SUPPLIED WITH MILL FINISH. EXTERIOR OF FRAME WHICH COMES IN CONTACT WITH CONCRETE SHALL HAVE ONE COAT BLACK PRIMER.
9. EACH HATCH SHALL BE SUPPLIED WITH A 316 STAINLESS STEEL SLAM LOCK, WITH THE KEY WAY PROTECTED BY A THREADED ALUMINUM PLUG. THE PLUG SHALL BE FLUSH WITH THE TOP OF THE 1/4" DIAMOND PLATE. THE SLAM LOCK SHALL BE FASTENED WITH GRADE 316 STAINLESS STEEL BOLTS AND WASHERS.
10. EACH HATCH SHALL BE SUPPLIED WITH A RECESSED PADLOCK CLIP (PADLOCK BY OTHERS).
11. EACH HATCH SHALL BE EQUIPPED WITH A STAINLESS STEEL LIFT HANDLE. LIFT HANDLES SHALL BE FLUSH WITH TOP OF 1/4" DIAMOND PLATE.
12. EACH HATCH IS SUPPLIED WITH A 1-1/2" THREADED DRAIN COUPLER ON THE UNDERSIDE OF CHANNEL FRAME, FOR PIPE CONNECTION. (SPECIAL LOCATION).

PROJECT REFERENCE NO. <i>R-2582A</i>		SHEET NO. <i>UC-42</i>	
DESIGNED BY: SHF			
DRAWN BY: SHF			
CHECKED BY: KCZ			
APPROVED BY: KCZ			
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY	
UTILITY CONSTRUCTION			
DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED			
		598 East Chatham Street - Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221 NC License: F-0160	

SANFILIPPO PS DETAILS

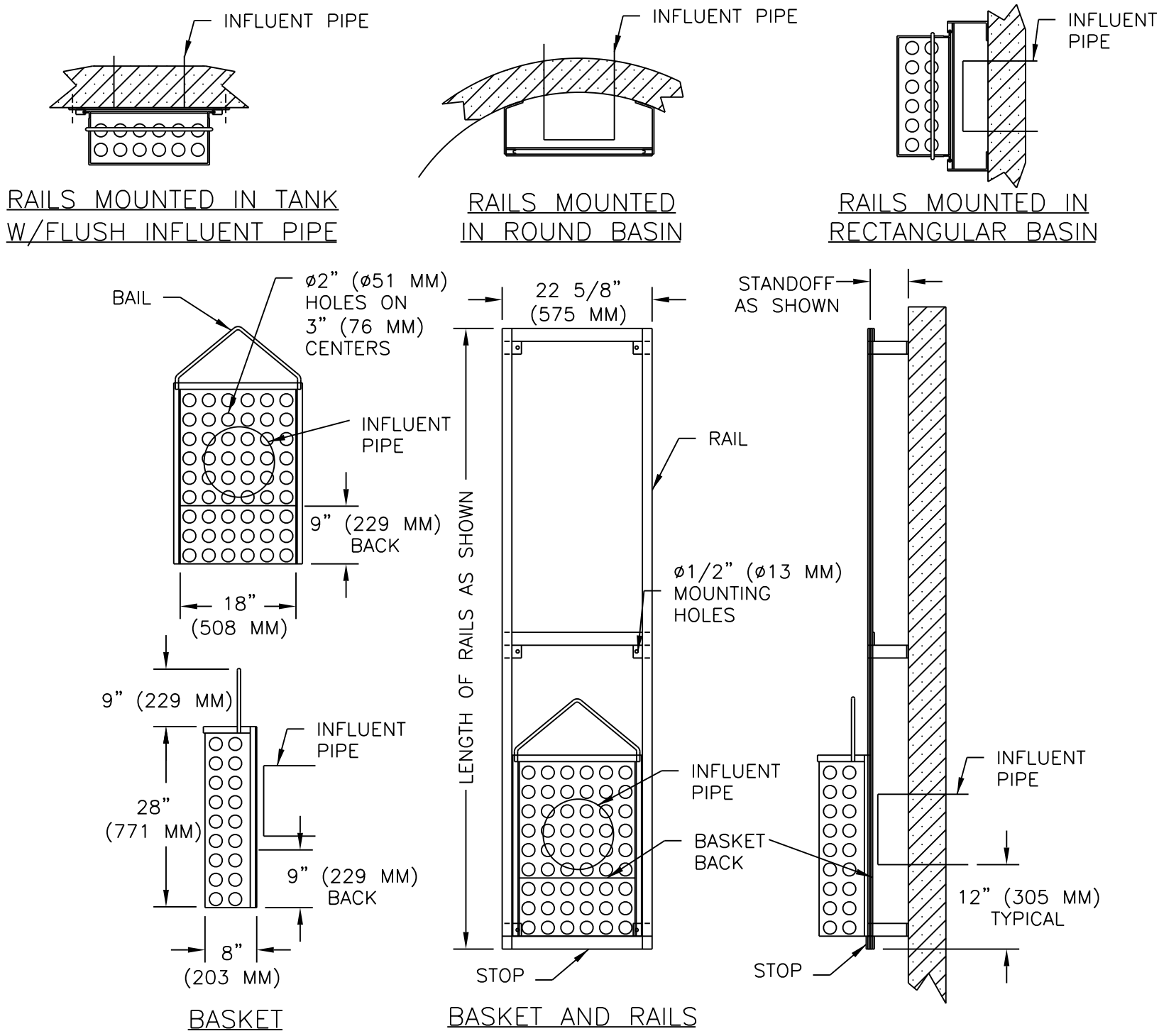
5/14/99



- NOTES:
1. HOIST SOCKET SHALL BE PROVIDED WITH STAINLESS STEEL TYPE-316 CONSTRUCTION.
 2. HOIST SOCKET SHALL BE PROVIDED WITH POLYMER LINING FOR SMOOTHER ROTATION.
 3. HOIST SOKET SHALL BE CAST INTO TOP SLAB.

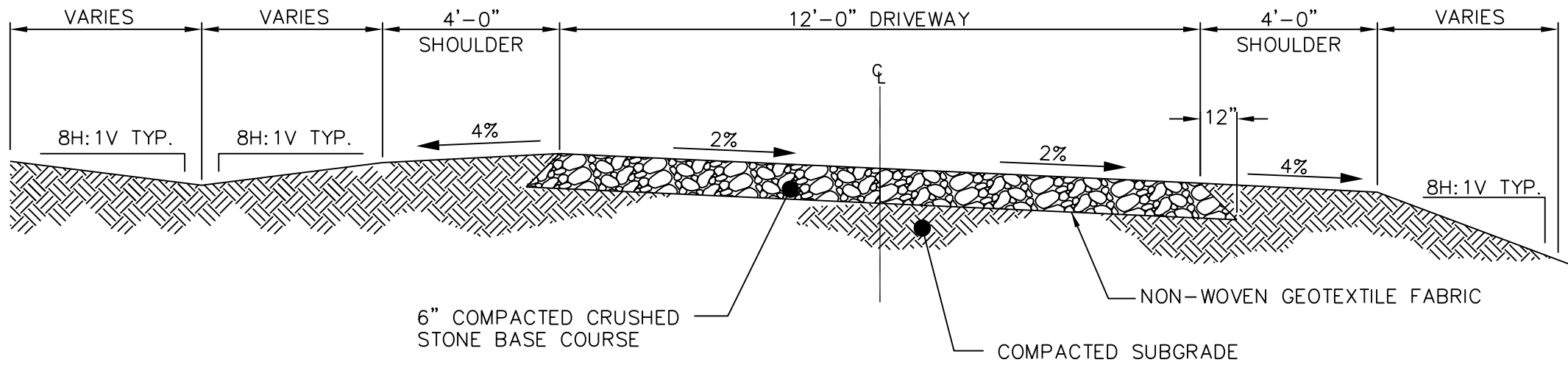
EMBEDDED PORTABLE HOIST SOCKET

NOT TO SCALE



SERIES B1A TRASH BASKET DETAIL

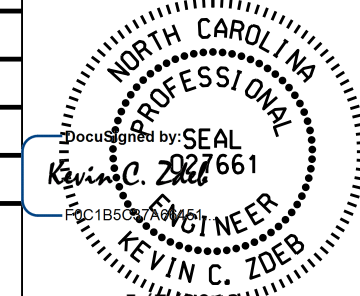

NOT TO SCALE



SANFILIPPO PUMP STATION ACCESS ROAD DETAIL


NOT TO SCALE

- NOTES:
1. SLOPES SHALL NOT BE STEEPER THAN 3H:1V BEYOND SHOULDER POINT.


PROJECT REFERENCE NO.		SHEET NO.
R-2582A		UC-43
DESIGNED BY: SHF		
DRAWN BY: SHF		
CHECKED BY: KCZ		
APPROVED BY: KCZ		
REVISED:		
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UTILITY CONSTRUCTION		
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SANFILIPPO PS DETAILS


SYMBOLS




3/4" x 10" COPPER CLAD GROUND ROD;
SEE DETAIL 2 SHEET E04 FOR CABLE
CONNECTION DETAILS



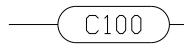
EXOTHERMIC WELD OR MECHANICAL
CONNECTION; REFER TO APPROPRIATE
DETAIL CONNECTION




EQUIPMENT CONNECTION;
COORDINATE WITH SUPPLIER
PRIOR TO ROUGH-IN




GFI RECEPTACLE;
WEATHER PROOF COVER
& BOX




C100
CONDUIT IDENTIFIER.
REFER TO CONDUIT &
CABLE SCHEDULE.



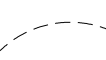
ELECTRICAL DISCONNECT;
NUMBER INDICATES TYPE; REFER
TO DISCONNECT SCHEDULE



SINGLE POLE SWITCH; COORDINATE LOCATION
WITH DOOR SWING & MILLWORK; MOUNTING
HEIGHT PER NC STATE BLDG CODE VOL 1-C



UNSWITCHED CIRCUIT



SWITCHED CIRCUIT

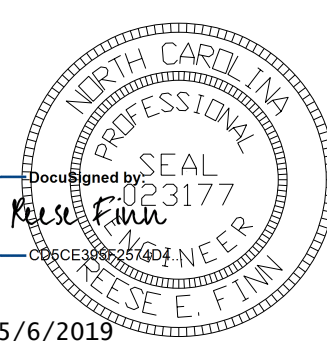
DRAWING SCHEDULE

DRAWING NUMBER	DRAWING TITLE	DATE	ISSUE						
			05/06/2019	DOT REVIEW					
UC-44	ELECTRICAL COVER SHEET SANFILIPPO		●						
UC-45	ELECTRICAL POWER RISER SANFILIPPO		●						
UC-46	CONDUIT AND CABLE SCHEDULE SANFILIPPO		●						
UC-47	DETAILS SANFILIPPO		●						



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PROJECT REFERENCE NO. <i>R-2582A</i>		SHEET NO. <i>UC-44</i>
DESIGNED BY:	REF	
DRAWN BY:	REF	
CHECKED BY:	REF	
APPROVED BY:	REF	
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		5/6/2019 UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		
UTILITY CONSTRUCTION PLANS ONLY		

UTILITY CONSTRUCTION

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ENERGY CODE INFORMATION

Electrical System and Equipment

Method of Compliance: Prescriptive

Lighting Schedule
Lamp type required in fixture – See Fixture Schedule
Number of lamps in fixture – See Fixture Schedule
Ballast type used in fixture – See Fixture Schedule
Number of ballasts in fixture – See Fixture Schedule
Total wattage per fixture – See Fixture Schedule
Total interior wattage specified vs. allowed – N/A
Total exterior wattage specified vs. allowed – 78.6 lumens/watt specified vs. 45 lumens/watt allowed

Equipment schedules with motors (not used for mechanical systems)
Motor horsepower – N/A
Number of phases – N/A
Minimum efficiency – N/A
Motor type – N/A
of poles – N/A

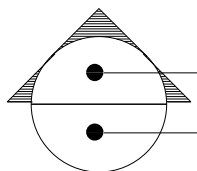
Designer Statement:
To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of North Carolina International Energy code

Signed: _____
Name: REESE E. FINN
Title: Engineer

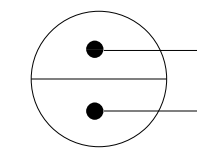
LIGHT FIXTURE SCHEDULE

ID	DESCRIPTION	LAMP/ QTY	BALLAST/ QTY	VOLTS	WATTS	NOTES
A	LITHONIA EIS 2 54T5HO	T5HO 54W 2	GEB 1	120	108	ENCLOSED & GASKETED FLOURESCENT STRIP. WET LABEL. SURFACE MOUNTED. CONTRACTOR TO FURNISH & INSTALL.


MISC. DWG. SYMBOLS



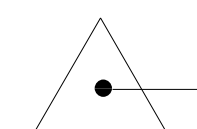
SECTION LETTER
SECTION DRAWING NUMBER



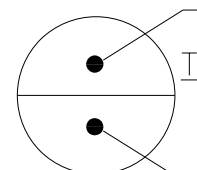
DETAIL NUMBER
DRAWING NUMBER



PLAN KEY NOTE



DRAWING REVISION NUMBER



DETAIL NUMBER
DRAWING NUMBER
TITLE
SCALE:

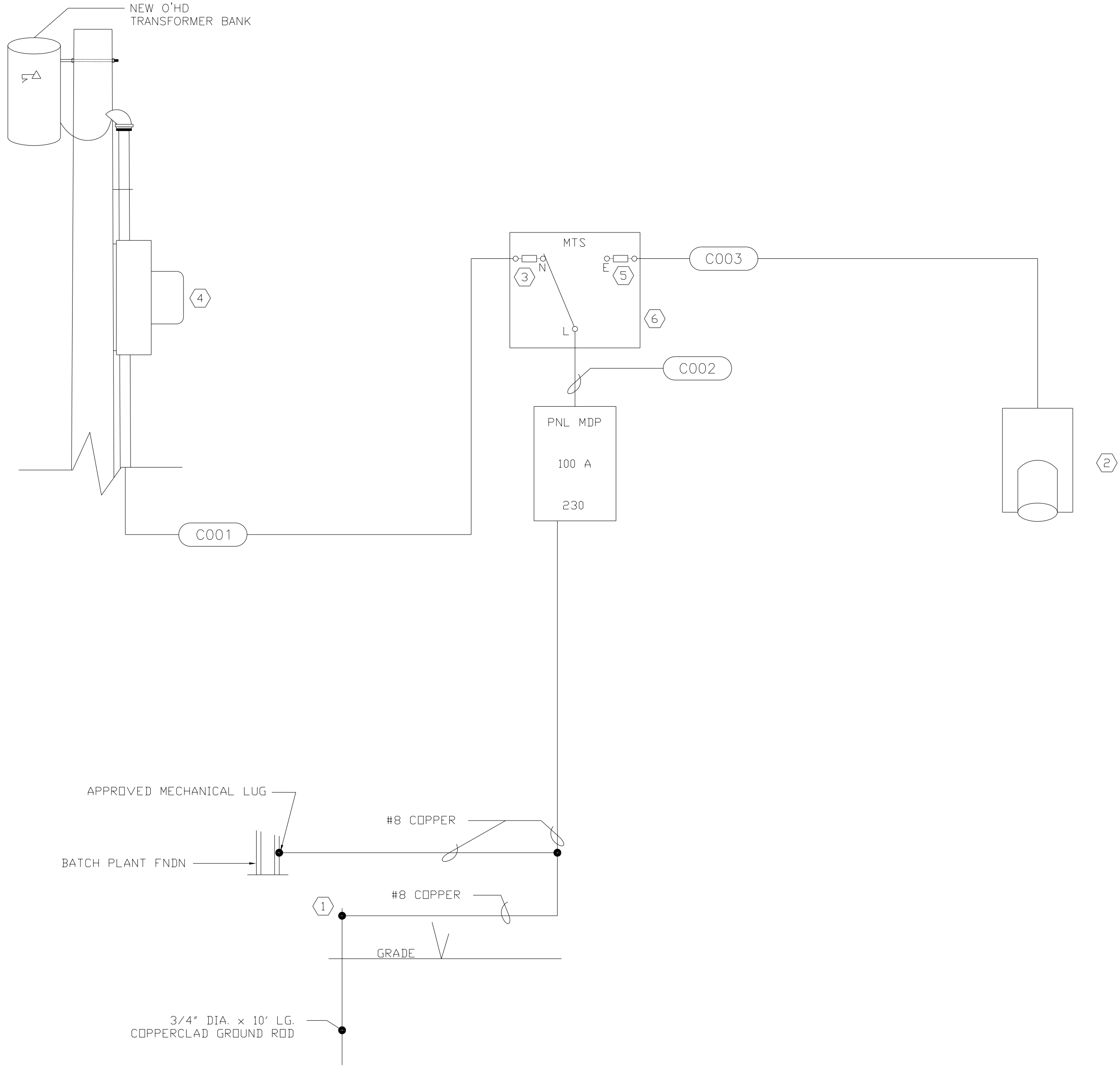
NOTE TO REVIEWER

NOTE TO REVIEWER

THIS APPLICATION IS TO PROVIDE
UTILITY POWER AND CONTROL WIRING
FOR A RELOCATED PUMPING STATION.

8/17/99

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1 ELECTRICAL POWER RISER
UC-45 SCALE: N.T.S.

GENERAL NOTE:

THE CONDUIT ROUTING IS DIAGRAMMATIC. REFER TO CONDUIT & CABLE SCHEDULE FOR SIZE & CABLE CONTENT. THE EXACT ROUTING AND COORDINATION WITH SITE CONDITIONS IS THE CONTRACTORS RESPONSIBILITY.

Keyed Notes:

- 1 APPROVED MECHANICAL GROUNDING LUG.
- 2 KILLARK VERSAMATE 60A 2W 3P RECEPTACLE. MODEL VR632E4. COORDINATE WITH OWNER'S EQUIPMENT.
- 3 RK5 100A FUSE
- 4 UTILITY METER. COORDINATE LOCATION AND TYPE WITH UTILITY.
- 5 RK5 60A FUSE
- 6 SQUARE D DT223RB NEMA 3R DOUBLE THROW FUSED SWITCH.

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Phone: 919.297.0220 Fax: 919.297.0221

PROJECT REFERENCE NO. <i>R-2582A</i>		SHEET NO. <i>UC-45</i>	
DESIGNED BY:	REF		
DRAWN BY:	REF		
CHECKED BY:	REF		
APPROVED BY:	REF		
REVISED:			
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		5/6/2019	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

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UNLESS ALL SIGNATURES COMPLETED

VOLTAGE: 230 AMPS: 100 AIC: 12,158				PANEL MDP								MAIN BREAKER: M.L.O. PHASE: 3 WIRE: 4 MOUNTING: SURFACE			
CKT	DESCRIPTION	C	W	P	CB	PHASE LOADS		VA	CB	P	W	C	DESCRIPTION	CKT	
						A	B								
1	PUMP - 1	3/4	10	2	30	2040	2220	180	20	1	12	1/2	RECEPTACLE	2	
3				2	30	2040								4	
5	PUMP - 2	3/4	10	2	30	2040	2160	120	20	1	12	1/2	CANOPY LIGHT	6	
7				2	30	2040		2340	300	15	1	14	1/2	PLC CONTROL	8
9							0							10	
11								0						12	
13							0							14	
15								0						16	
17							0							18	
						VA/ PHASE:		4380	4380		NEC LOAD: 9780				
						TOTAL VA:		8760		AMPS: 25					
						TOTAL AMPS:		22							
						NEC LOAD/ PHASE:		4890	4890						
NOTES: 1. PROVIDE BOLT-ON BREAKERS 2. SQUARE D NGOD															

8/17/99

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PROJECT REFERENCE NO. <i>R-2582A</i>		SHEET NO. <i>UC-46</i>
DESIGNED BY:	REF	<div><div>DocuSigned by: <i>Russ Fink</i> 1770633177</div><div>PROCESSED BY: MDP</div></div> <div><div>NORTH CAROLINA PROFESSIONAL ENGINEER C. E. E. FINN</div><div>5/6/2019</div></div>
DRAWN BY:	REF	
CHECKED BY:	REF	
APPROVED BY:	REF	
REVISED:		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION		
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

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CONDUIT AND CABLE SCHEDULE				
CONDUIT I.D.	CONDUIT SIZE	CABLE/ WIRE	FROM	TO
C001	1-1/4"	3 #3 THHN COPPER	METER BASE	MTS
C002	1-1/4"	3 #3 THHN COPPER	MTS	MDP
C003	1-1/4"	3 #3 THHN COPPER	MTS	GEN RECPT

1
UC-46

CONDUIT & CABLE SCHEDULE
SCALE: N.T.S.

GENERAL NOTES:

- 1

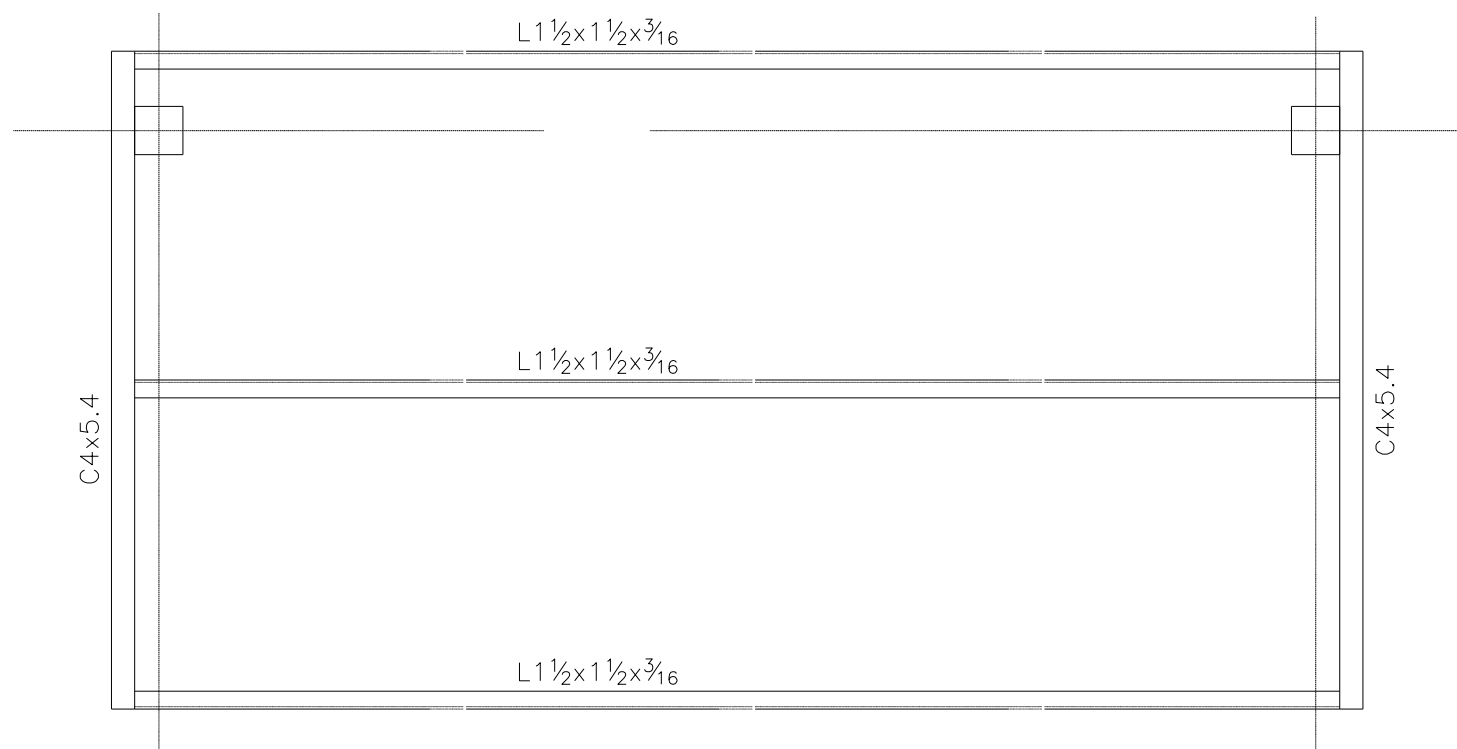
ALL CONDUIT IS RIGID ALUMINUM
UNLESS OTHERWISE NOTED ON THE
PLANS
- 2

CONTRACTOR IS RESPONSIBLE FOR ACTUAL
QUANTITIES BASED ON TAKE OFF & FIELD
CONDITIONS.

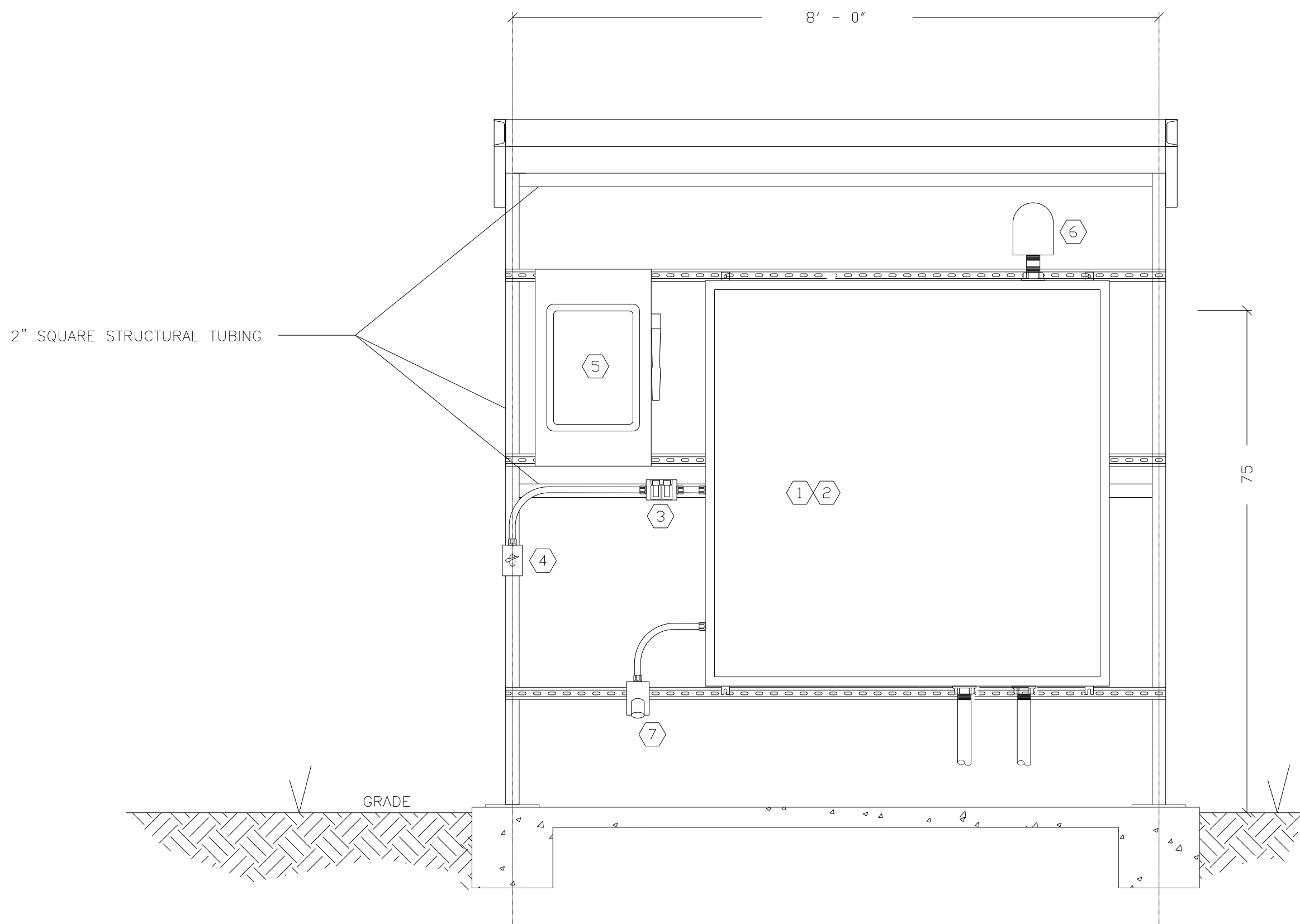
SANFILIPPO PS ELECTRICAL

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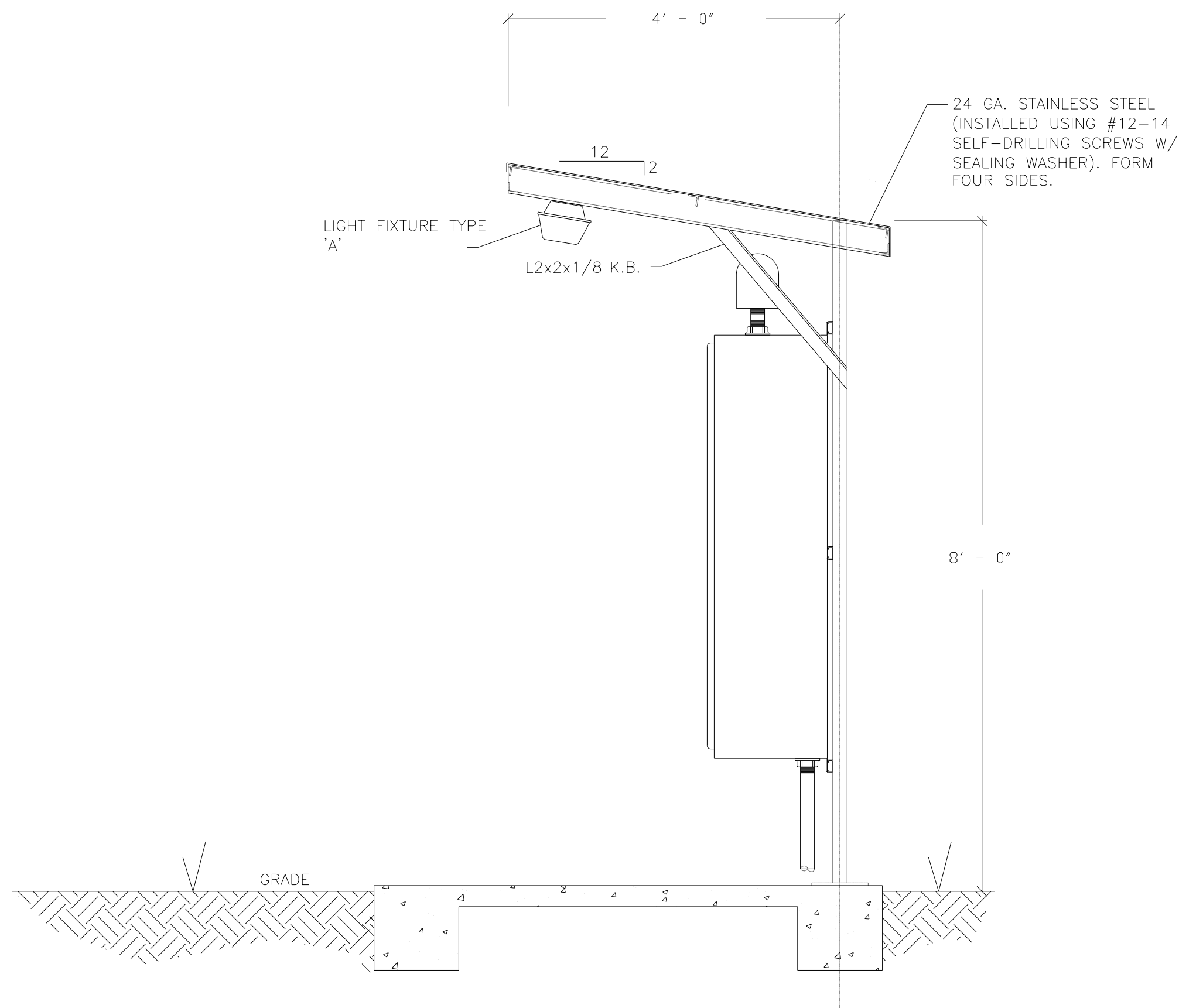
- (1) 60x60x12 NEMA 3R CONTROL CABINET. PROVIDE BACK PANEL AND LOCKING HANDLE.
- (2) MOUNT ATS, MDP, FLOW METER CONTROL UNIT, AND MISC. CONTROL UNITS. SIZE IS NOMINAL. CONFIRM SPACE REQUIREMENTS WITH EQUIPMENT SUPPLIERS. ADJUST BOX SIZE IF REQUIRED.
- (3) GFI RECEPTACLE WITH IN-USE COVER.
- (4) SP SWITCH WITH WP COVER. CONTROLS CANDOPY LIGHT.
- (5) 2P DOUBLE THROW NEMA 3R MANUAL TRANSFER SWITCH, FUSED. SQUARE D DT223RB.
- (6) WARMA FLASHING RED LED WARNING LIGHT. COORDINATE WITH CONTRLS VENDOR.
- (7) KILLARK VERSAMATE 60A 2W 3P RECEPTACLE. MODEL VR632E4. COORDINATE WITH OWNER'S EQUIPMENT.



3 SERVICE CANOPY PLAN VIEW
UC-47 SCALE: 3/4" = 1'-0"



1 SERVICE CANOPY FRONT ELEVATION
UC-47 SCALE: 3/4" = 1'-0"



2 SERVICE CANOPY SIDE ELEVATION
UC-47 SCALE: 3/4" = 1'-0"

TIP PROJECT: R-2582A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

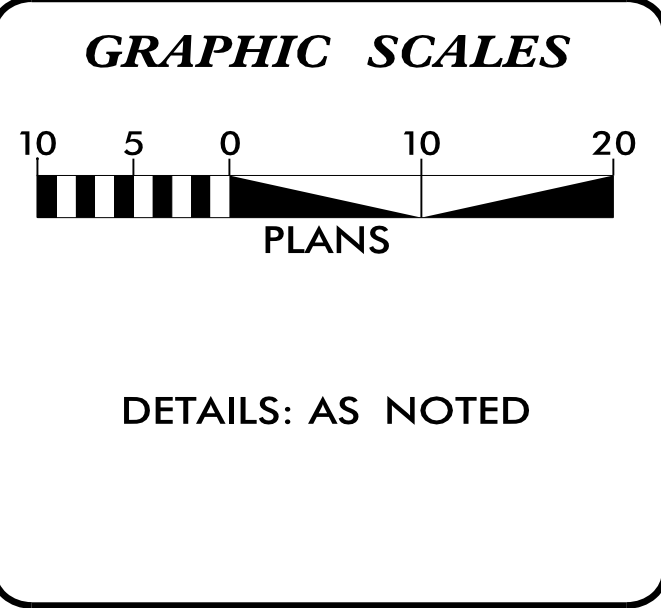
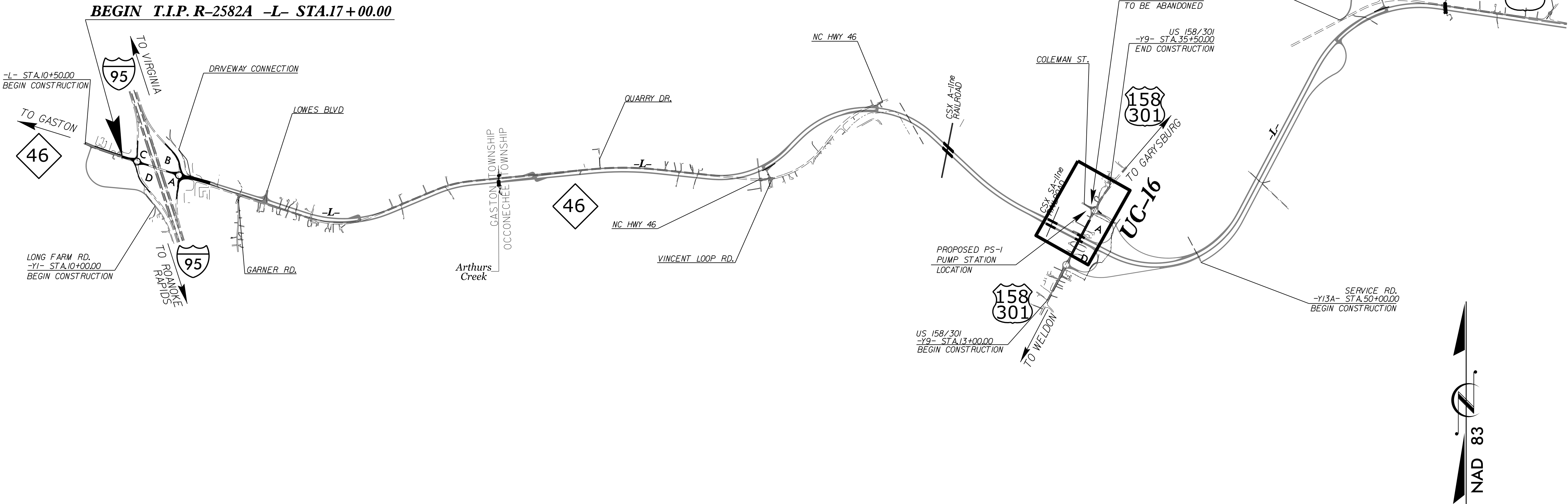
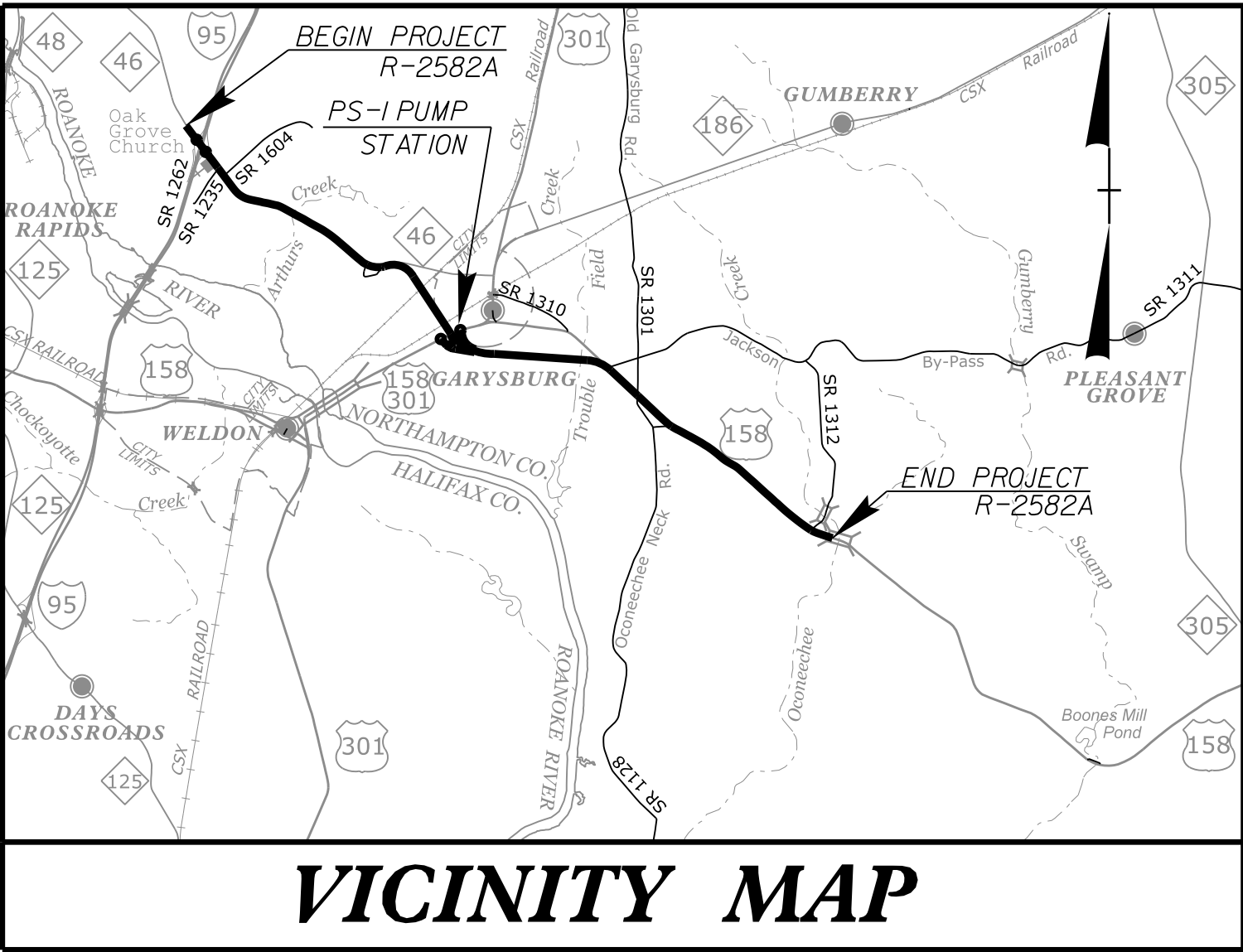
T.I.P. NO.	SHEET NO.
R-2582A	UC-48

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UTILITY CONSTRUCTION PLANS
PS-1 PUMP STATION

LOCATION: INTERSECTION OF US-158/US-301 AND
COLEMAN STREET IN GARYSBURG

TYPE OF WORK: SANITARY PUMP STATION CONSTRUCTION



SHEET NO.:	DESCRIPTION:
UC-48	TITLE SHEET
UC-49	SITE PLAN
UC-50	GRADING PLAN
UC-51	DETAILS
UC-52	DETAILS
UC-53	DETAILS
UC-54	ELECTRICAL TITLE SHEET
UC-55	ELECTRICAL POWER RISER
UC-56	CONDUIT AND CABLE SCHEDULE
UC-57	SERVICE CANOPY DETAILS

UTILITY OWNERS
(A) SANITARY SEWER - NORTHAMPTON COUNTY
(B) WATER - NORTHAMPTON COUNTY
(C) POWER - DOMINION ENERGY

PREPARED IN THE OFFICE OF	
	M A Engineering Consultants, Inc.
598 East Chatham Street - Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221 NC License: F-0160	
KEVIN C. ZDEB, PE	PROJECT ENGINEER
SAM FORSTER	PROJECT DESIGNER
WEBB WHITE	PROJECT UTILITY COORDINATOR

SEAL
5/7/2019

	DIVISION OF HIGHWAYS UTILITIES UNIT 1020 BIRCH RIDGE DRIVE RALEIGH, NC 27610 PHONE (919) 707-6690 FAX (919) 250-4151
NABIL HAMDAN	REGIONAL UTILITIES ENGINEER
KIFAH KAMIL	SENIOR UTILITIES ENGINEER
DAYTON MARTIN	REGIONAL UTILITY COORDINATOR
-	-

8/17/99

5/7/2019
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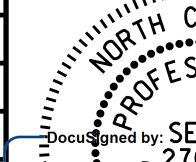


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Consultants, Inc.

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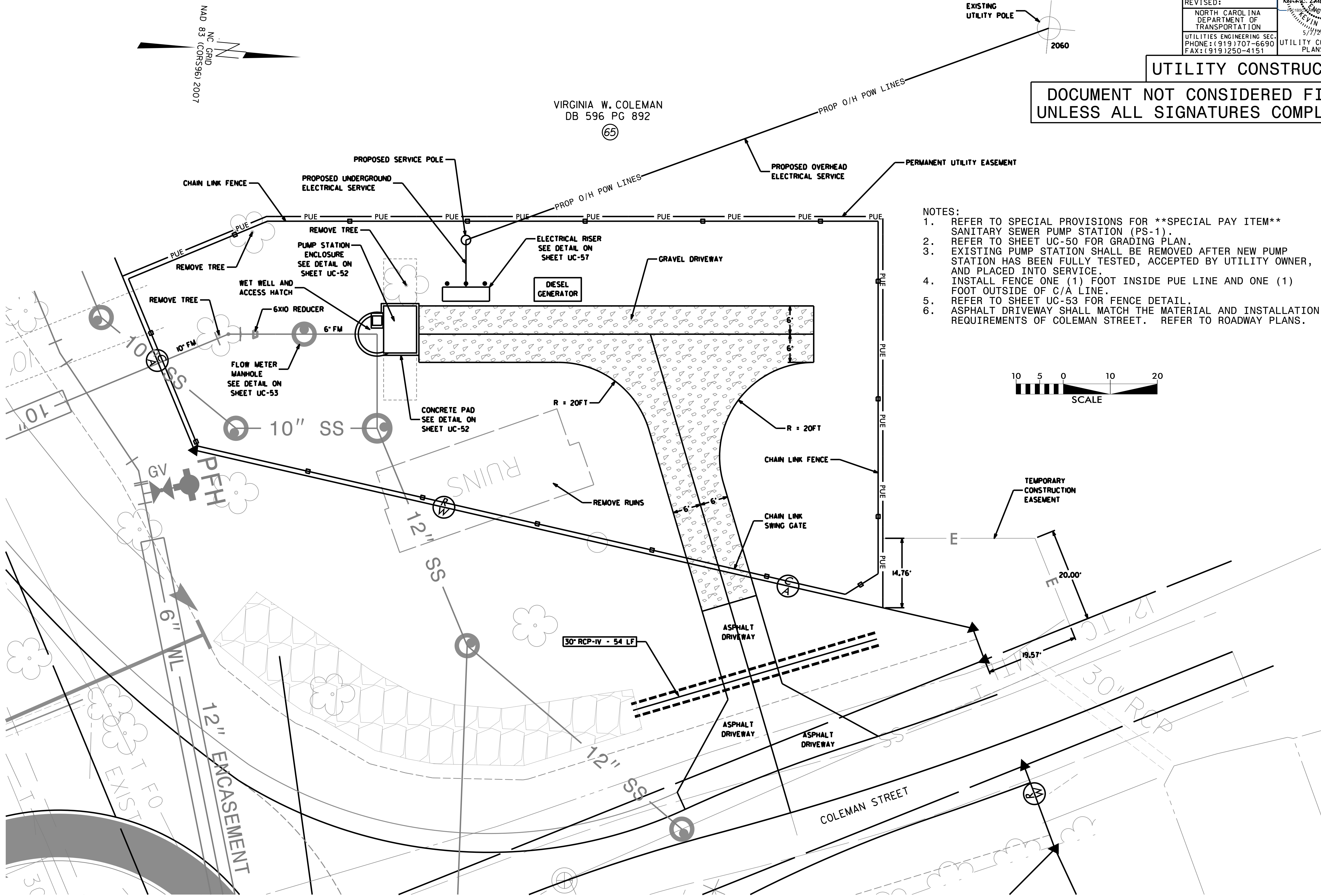
NC
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Cary, NC 27511
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PROJECT REFERENCE NO.		SHEET NO.
R-2582A		UC-49
DESIGNED BY: KCZ		
DRAWN BY: SHF		
CHECKED BY: KCZ		
APPROVED BY: KCZ		
REVISED:		
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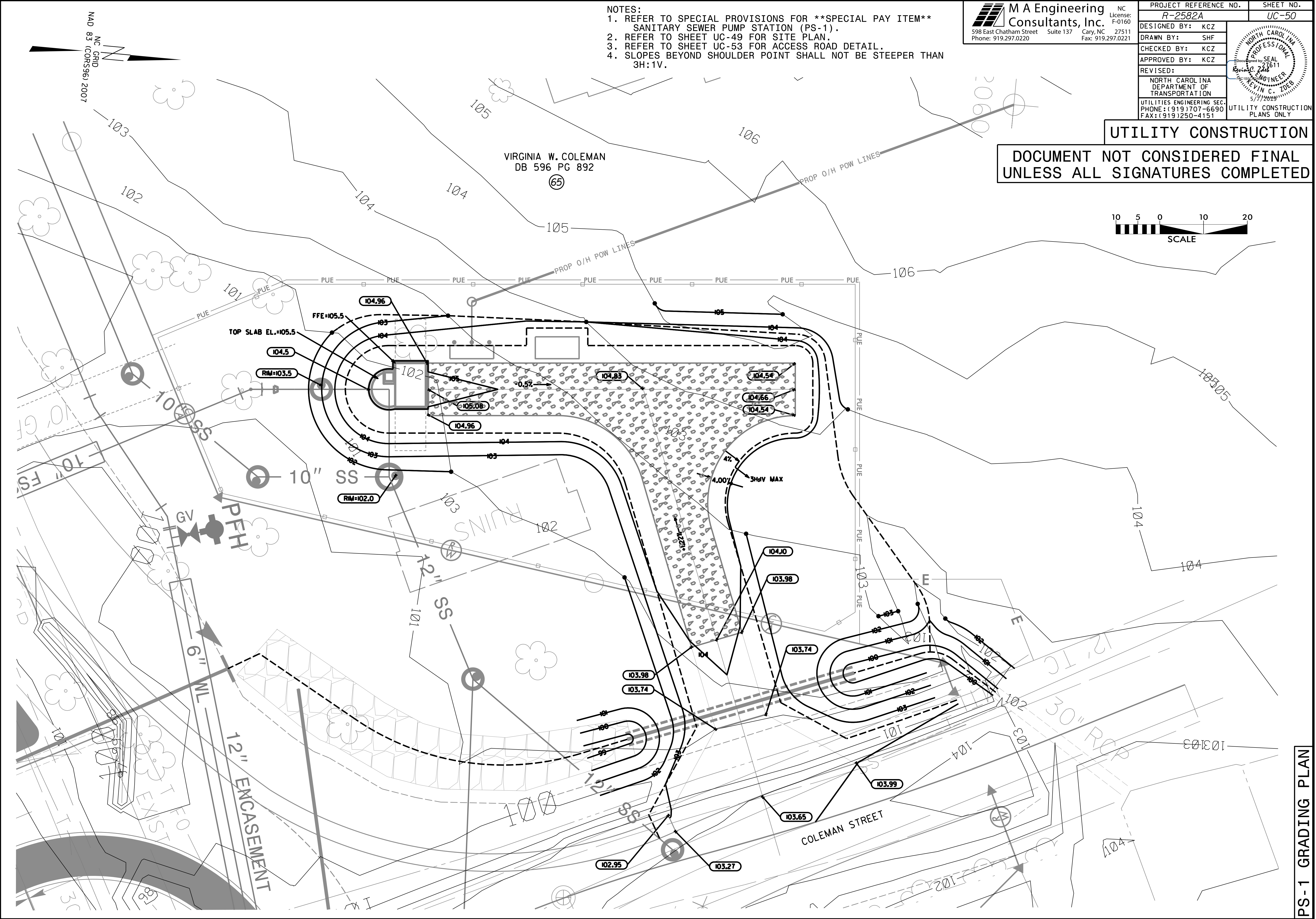
UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
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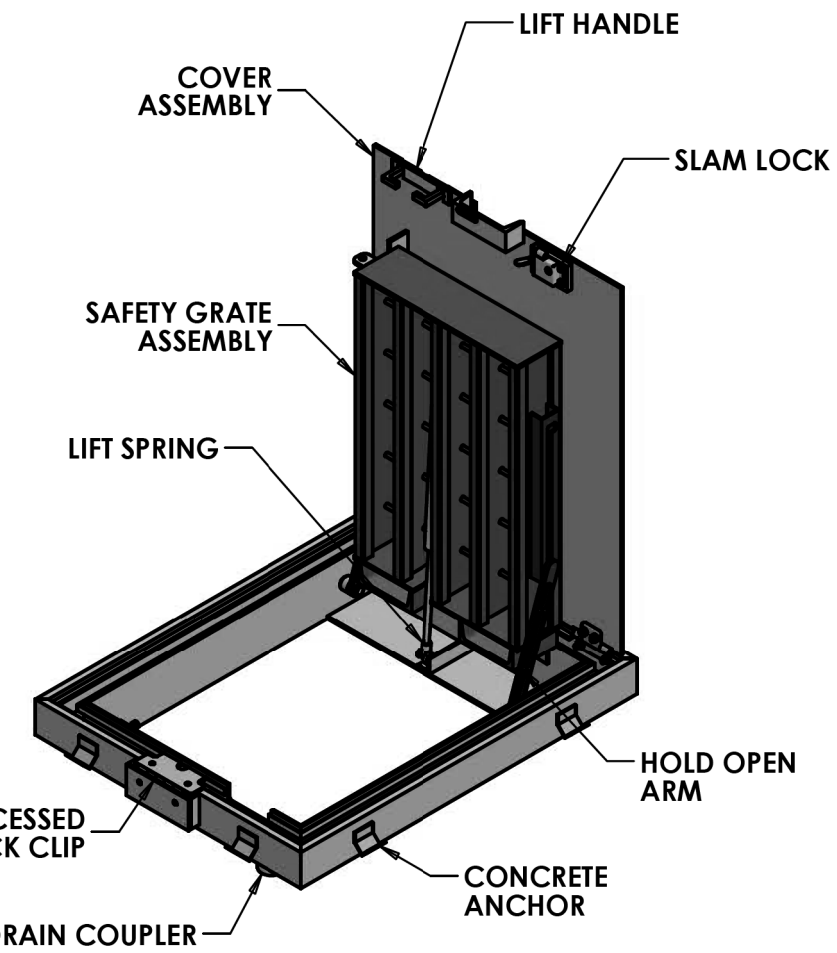
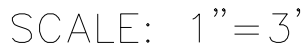


PS-1 SITE PLAN

5/7/2019
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11:35:33 AM



1. REFER TO SPECIAL PROVISIONS FOR **SPECIAL PAY ITEM** SANITARY SEWER PUMP STATION (PS-1).
2. EXISTING PS-1 PUMP STATION SHALL BE REMOVED AFTER NEW PUMP STATION HAS BEEN FULLY TESTED, ACCEPTED BY UTILITY OWNER, AND PLACED INTO SERVICE.
3. PUMP STATION SHALL MEET ALL STATE MINIMUM DESIGN REQUIREMENTS.
4. WET WELL SHALL BE EPOXY COATED (80 MILS).
5. REFER TO SHEET UC-52 FOR DIMENSIONAL TEMPLATE FOR CASTING OF HOLES IN WET WELL TOP SLAB.
6. CONCRETE PAD SHALL EXTEND A MINIMUM OF 6" BEYOND EACH SIDE OF THE PUMP ENCLOSURE.

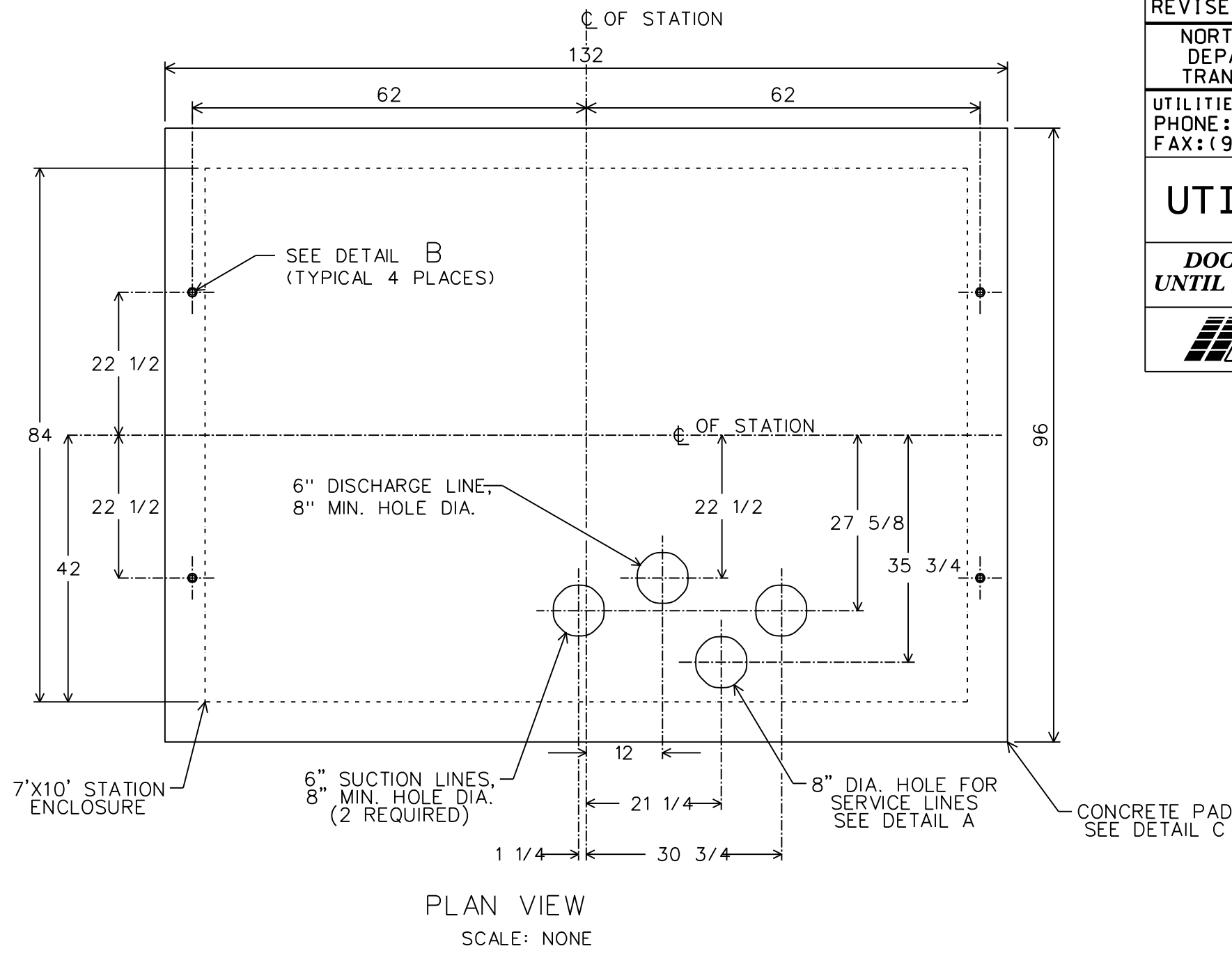
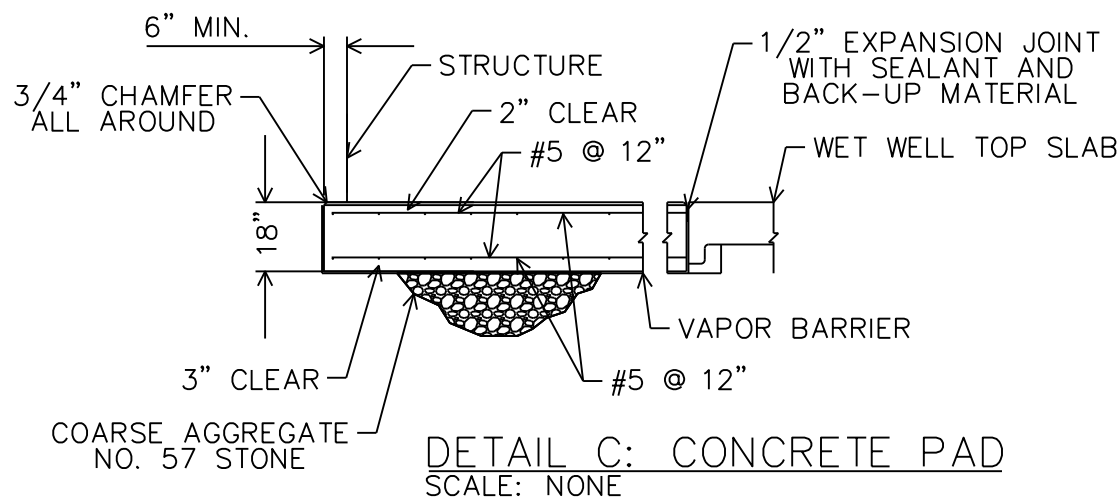
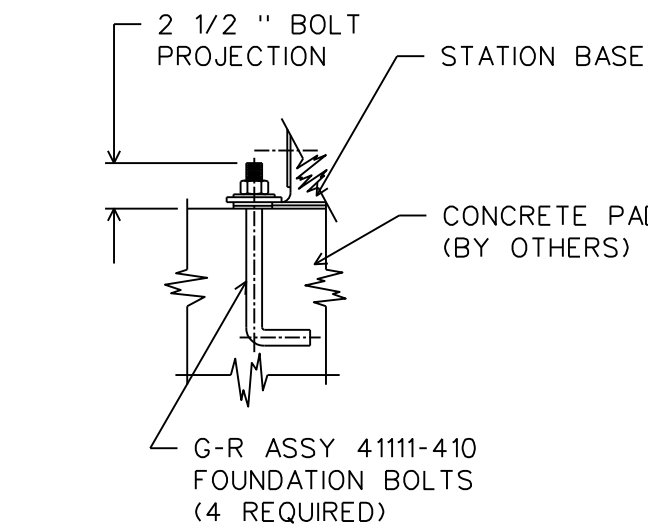
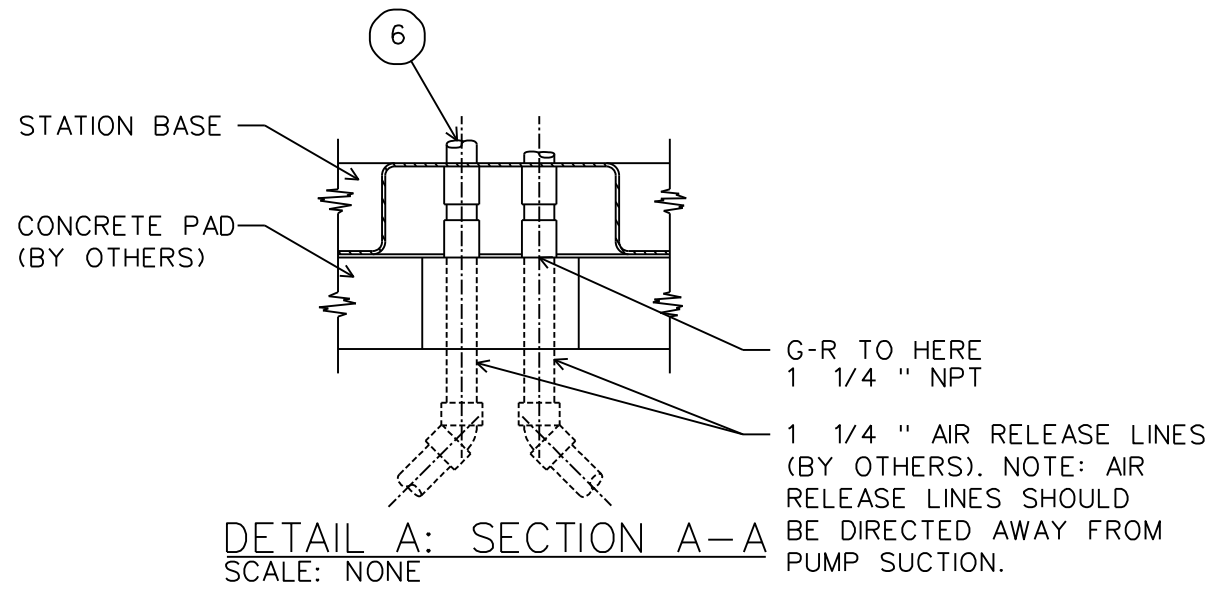
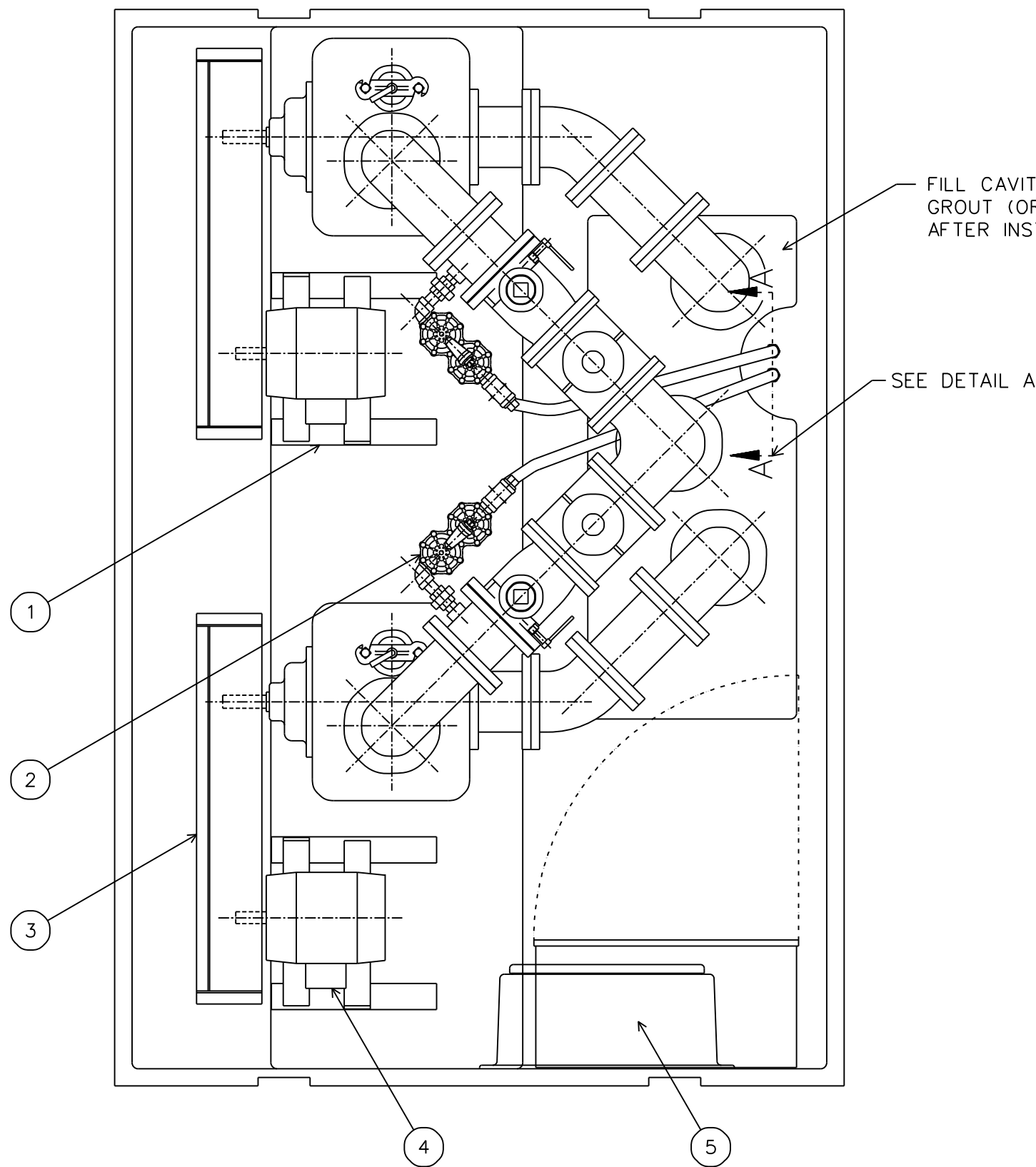


1. MATERIAL SHALL BE 6061-T6 ALUMINUM FOR BARS, ANGLES AND EXTRUSIONS, 1/4" DIAMOND PLATE SHALL BE 5086 ALUMINUM.
2. UNIT DESIGNED HEAVY DUTY, FOR 16,000 LBS + 30% IMPACT H-20 WHEEL LOADS, OVER A 10" X 20" CONTACT AREA. FRAMES AND BEARING PLATE MUST BE CAST INTO AND SUPPORTED BY CONCRETE DESIGNED FOR H-20 WHEEL LOADS.
3. UNIT NOT SUITABLE FOR WHEEL LINE PLACEMENT.
4. UNIT SUPPLIED WITH A HEAVY DUTY PNEU-SPRING, FOR EASE OF OPERATION WHEN OPENING GRATE. GRATE SHALL BE COUNTERBALANCED, SO ONE PERSON CAN EASILY OPEN THE SAFETY GRATE.
5. FRAME SHALL BE OF EXTRUDED ALUMINUM. A DOVETAIL GROOVE SHALL BE EXTRUDED INTO THE SEAT OF THE FRAME FOR A 1/8" SILICONE GASKET.
6. EACH HATCH SHALL BE EQUIPPED WITH A STAINLESS STEEL HOLD OPEN ARM. DOOR SHALL LOCK OPEN IN THE 90 DEGREE POSITION. HOLD OPEN ARM SHALL BE FASTENED TO THE FRAME WITH A 1/2" GRADE 316 STAINLESS STEEL BOLT.
7. HINGES SHALL BE OF HEAVY DUTY DESIGN. MATERIAL SHALL BE GRADE 316 STAINLESS STEEL. EACH HINGE SHALL HAVE A GRADE 316 STAINLESS STEEL, 3/8" DIAMETER HINGE PIN. HINGE SHALL BE FASTENED TO THE CHANNEL FRAME AND DIAMOND PLATE WITH GRADE 316 STAINLESS STEEL BOLTS AND NY-LOCK NUT.
8. ALUMINUM SHALL BE SUPPLIED WITH MILL FINISH. EXTERIOR OF FRAME WHICH COMES IN CONTACT WITH CONCRETE SHALL HAVE ONE COAT BLACK PRIMER.
9. EACH HATCH SHALL BE SUPPLIED WITH A STAINLESS STEEL SLAM LOCK, WITH THE KEY WAY PROTECTED BY A THREADED ALUMINUM PLUG. THE PLUG SHALL BE FLUSH WITH THE TOP OF THE 1/4" DIAMOND PLATE. THE SLAM LOCK SHALL BE FASTENED WITH GRADE 316 STAINLESS STEEL BOLTS AND WASHERS.
10. EACH HATCH SHALL BE SUPPLIED WITH A RECESSED PADLOCK CLIP (PADLOCK BY OTHERS).
11. EACH HATCH SHALL BE EQUIPPED WITH A STAINLESS STEEL LIFT HANDLE. LIFT HANDLES SHALL BE FLUSH WITH TOP OF 1/4" DIAMOND PLATE.
12. EACH HATCH IS SUPPLIED WITH A 1-1/2" THREADED DRAIN COUPLER ON THE UNDERSIDE OF CHANNEL FRAME, FOR PIPE CONNECTION. (SPECIAL LOCATION).

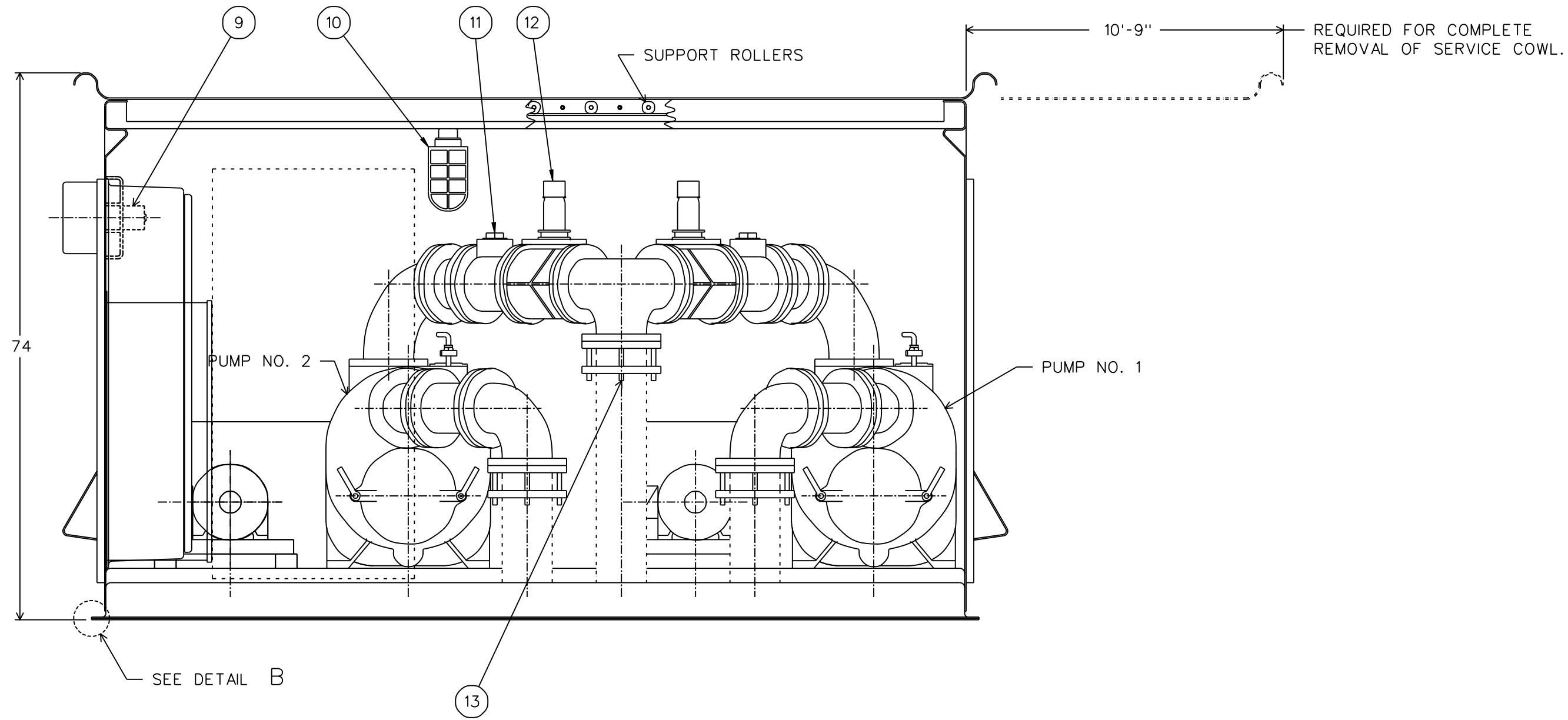
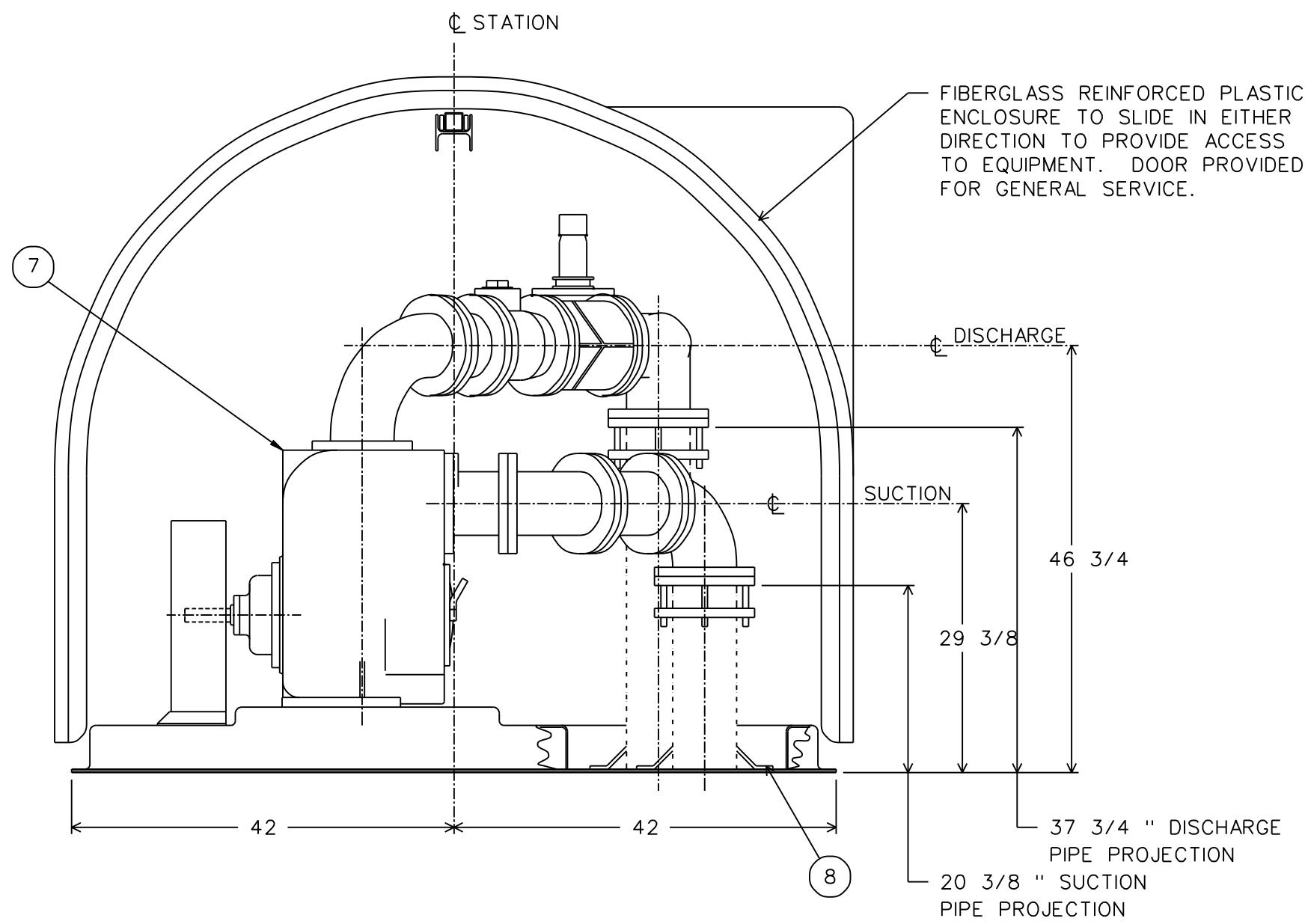
PS-1 DETAILS

5/14/99

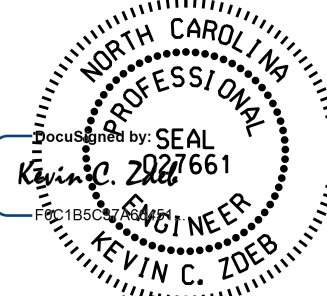

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ITEM	DESCRIPTION	MAT'L & SIZE
1	MOTOR BASE ASSY	STEEL
2	AIR RELEASE VALVE	FIBERGLASS 1 1/4 "
3	BELT GUARD ASSY	STEEL
4	MOTOR	CAST IRON
5	CONTROL PANEL	FIBERGLASS
6	AIR RELEASE LINE	FLEXIBLE 1 1/4 "
7	PUMP	CAST IRON T6A-B
8	GROUT DAM	RUBBER
9	EXHAUST FAN	500 CFM
10	VAPOR TIGHT LIGHT	200 WATT
11	DISCHARGE CHECK VALVE	CAST IRON 6"
12	DISCHARGE PLUG VALVE	CAST IRON 6"
13	ADAPTOR COUPLING	CAST IRON 6"

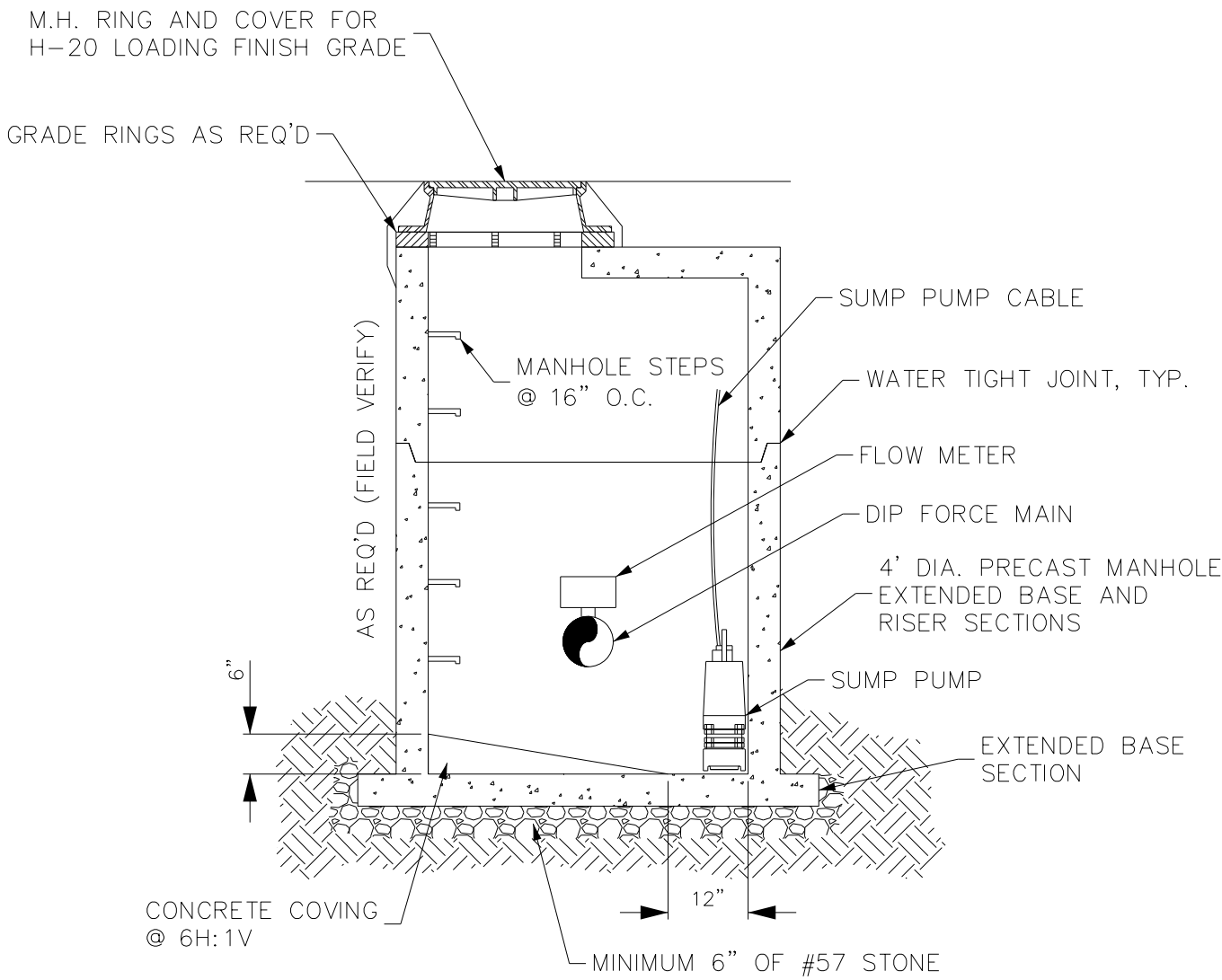


7'x10' ABOVEGROUND
SEWAGE LIFT STATION ASSEMBLY DETAIL

PROJECT REFERENCE NO. R-2582A		SHEET NO. UC-52	
DESIGNED BY: KCZ			
DRAWN BY: SHF			
CHECKED BY: KCZ			
APPROVED BY: KCZ			
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		UTILITY CONSTRUCTION PLANS ONLY	
UTILITY CONSTRUCTION			
DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES ARE COMPLETED			
 M A Engineering Consultants, Inc.		598 East Chatham Street - Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221 NC License: F-0160	

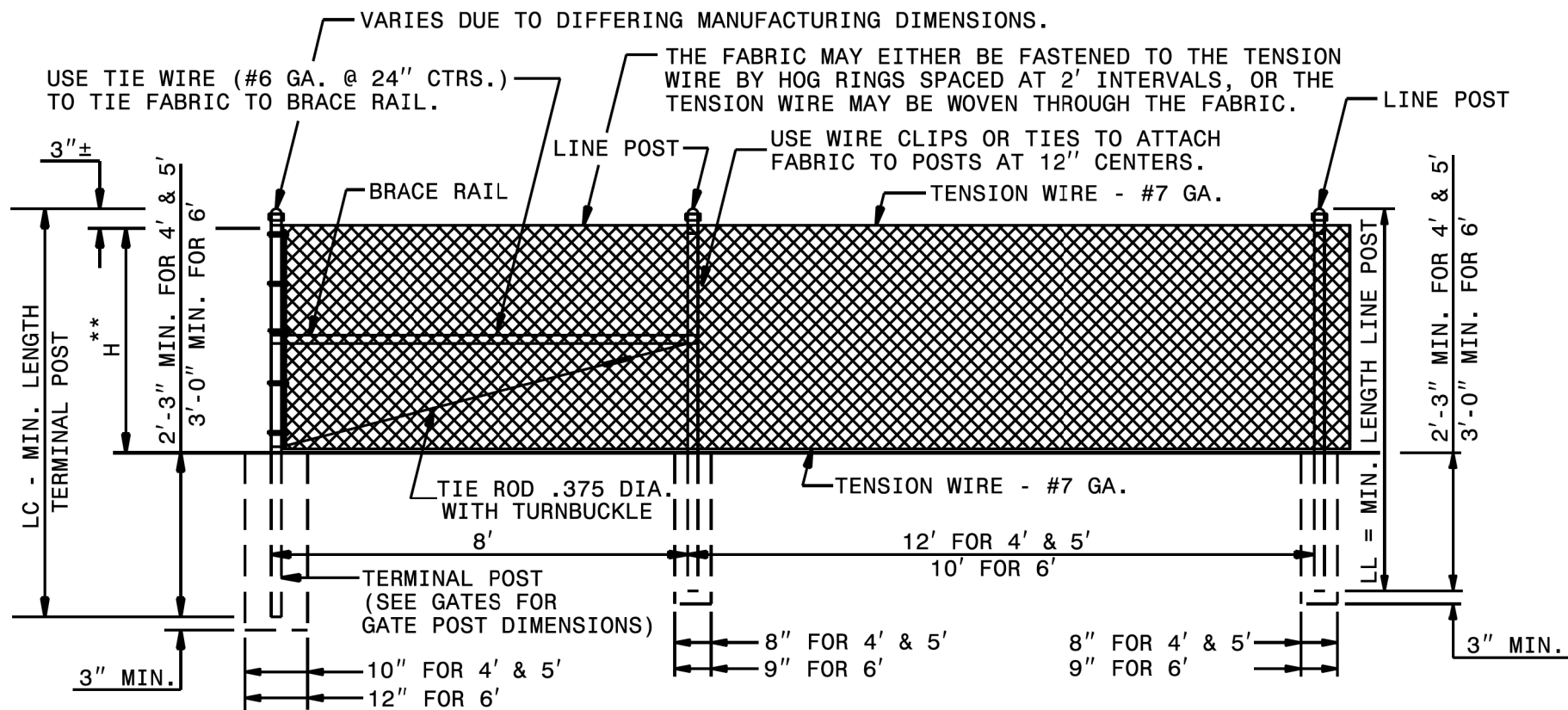
5/14/99

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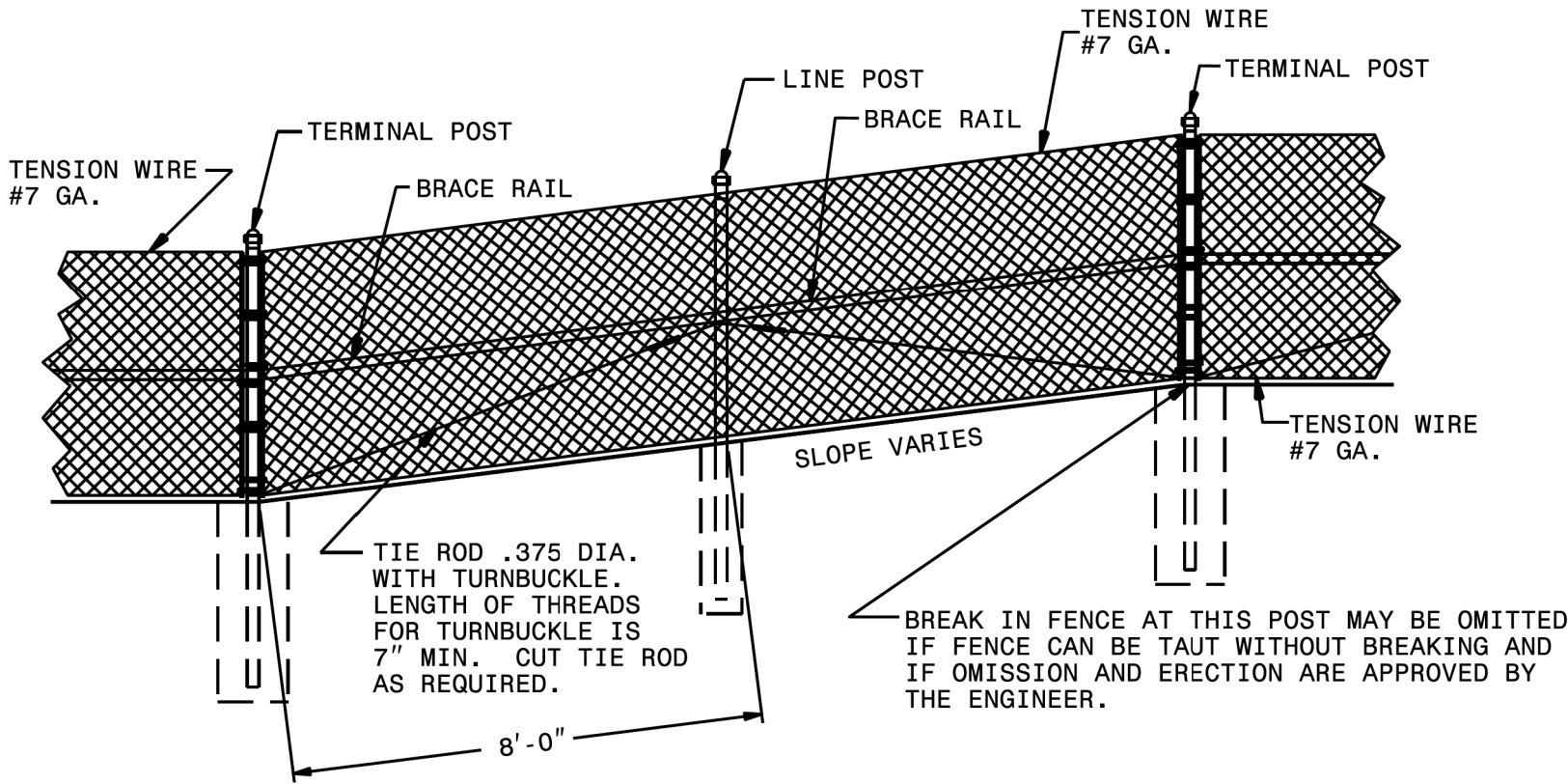


FLOW MONITORING MANHOLE DETAIL

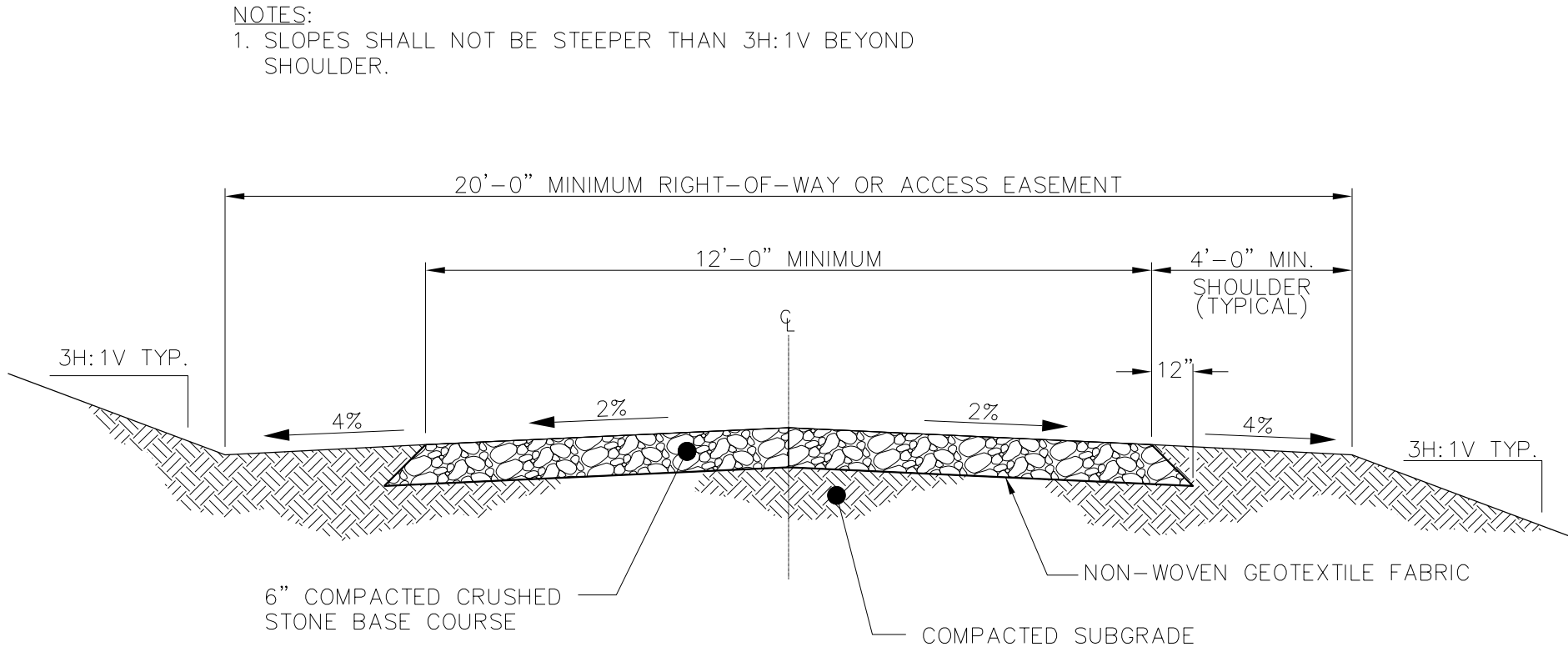
- NOTES:
1. CONTRACTOR SHALL PROVIDE SEPARATE CONDUITS FOR FLOW METER WIRING AND SUMP PUMP.
 2. CONDUITS SHALL BE RUN FROM FLOW METER MANHOLE TO PS-1 ELECTRICAL RISER.
 3. CONDUITS SHALL BE SIZED AS PER MANUFACTURER REQUIREMENTS.



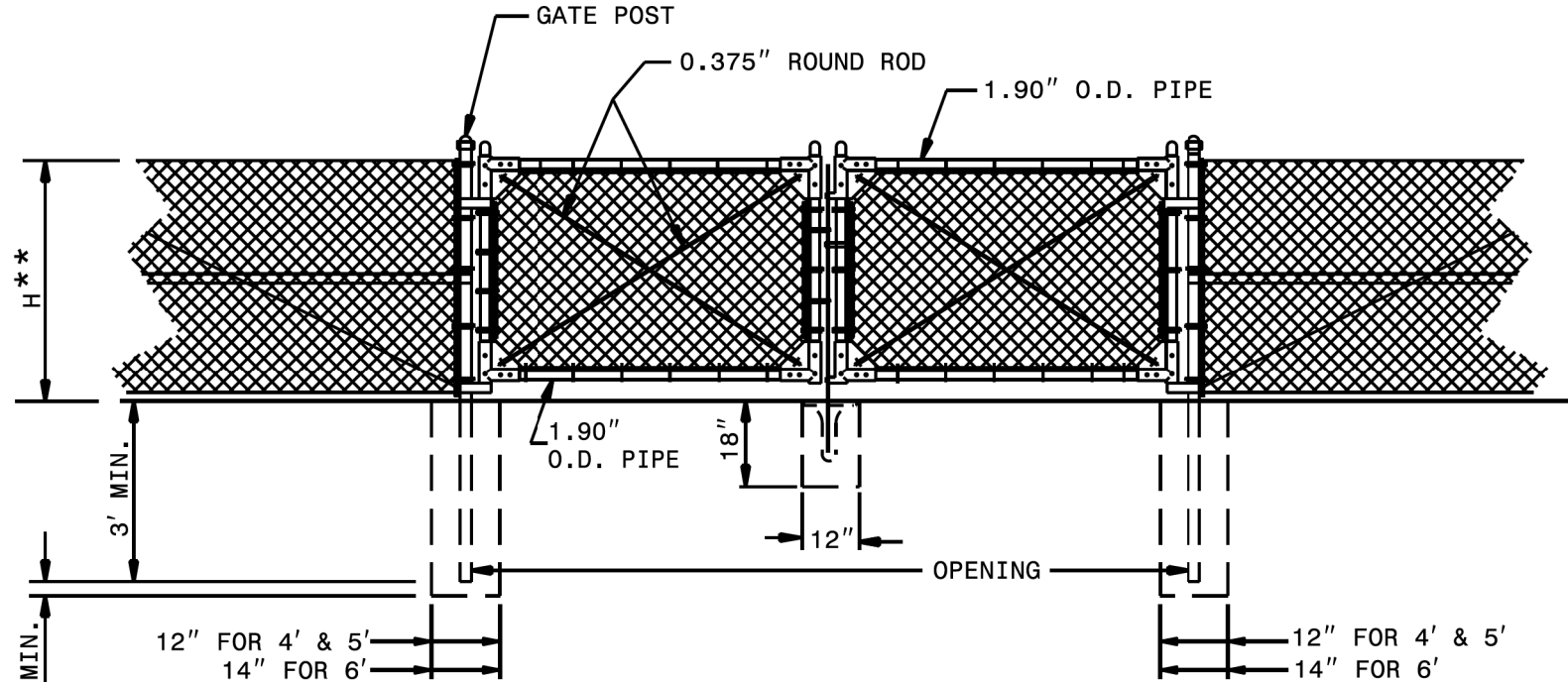
CHAIN LINK FENCE



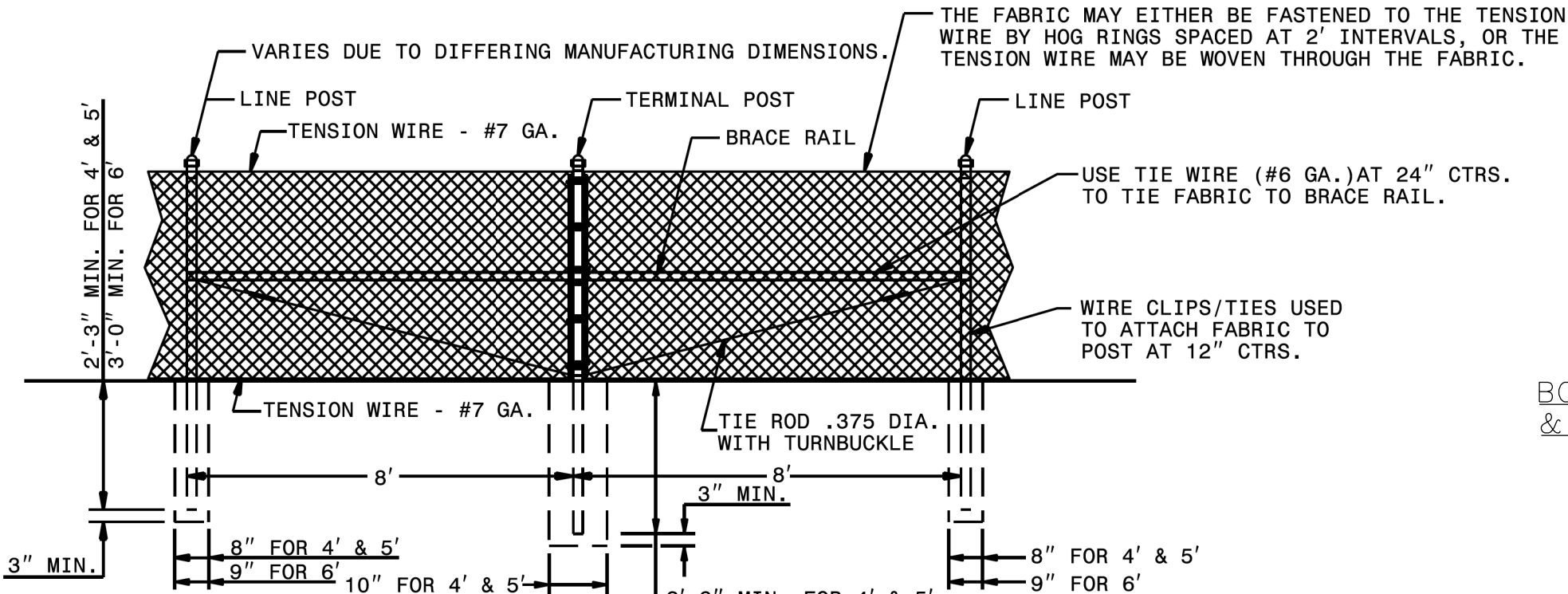
FENCE ON SHARP BREAK IN GRADE



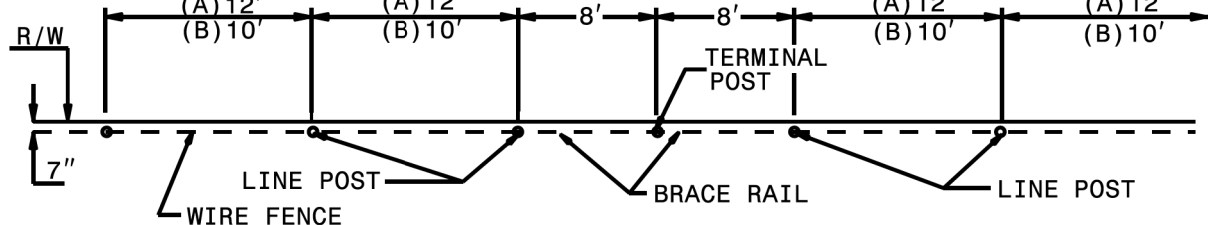
PS-1 PUMP STATION ACCESS ROAD DETAIL



DOUBLE SWING GATE

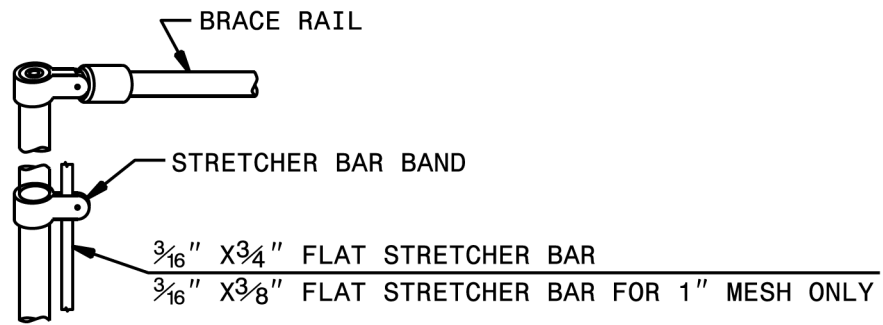


LINE BRACE

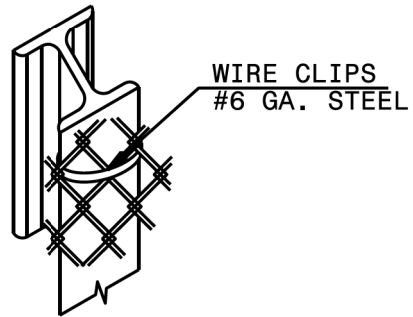


FENCE ALONG RIGHT-OF-WAY
LINE POST & TERMINAL POST SEQUENCE

6' HIGH CHAIN LINK FENCE DETAILS



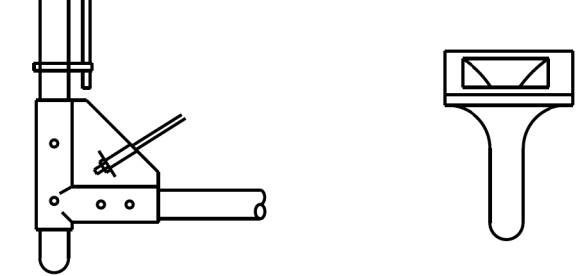
GATE OR TERMINAL POST
WITH STRETCHER BAR ATTACHMENT



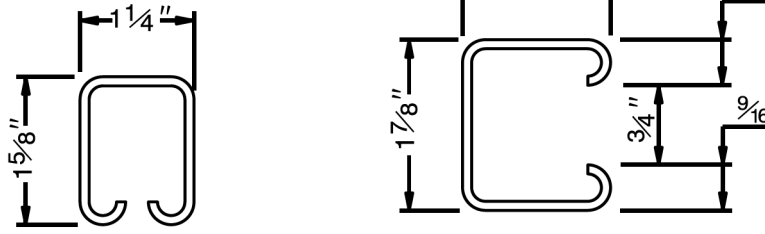
METHOD OF TYING FENCE
TO 'H' POST



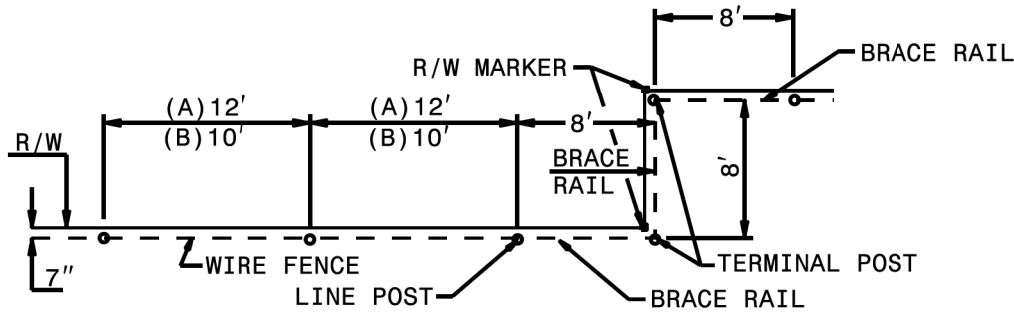
TOP HINGE
BOTTOM HINGE
LATCH FORK



BOTTOM GATE CORNER
& HINGE ATTACHMENT
PLUNGER BAR
CATCH



BRACE RAIL
LINE POST



FENCE ALONG
RIGHT-OF-WAY BRACING

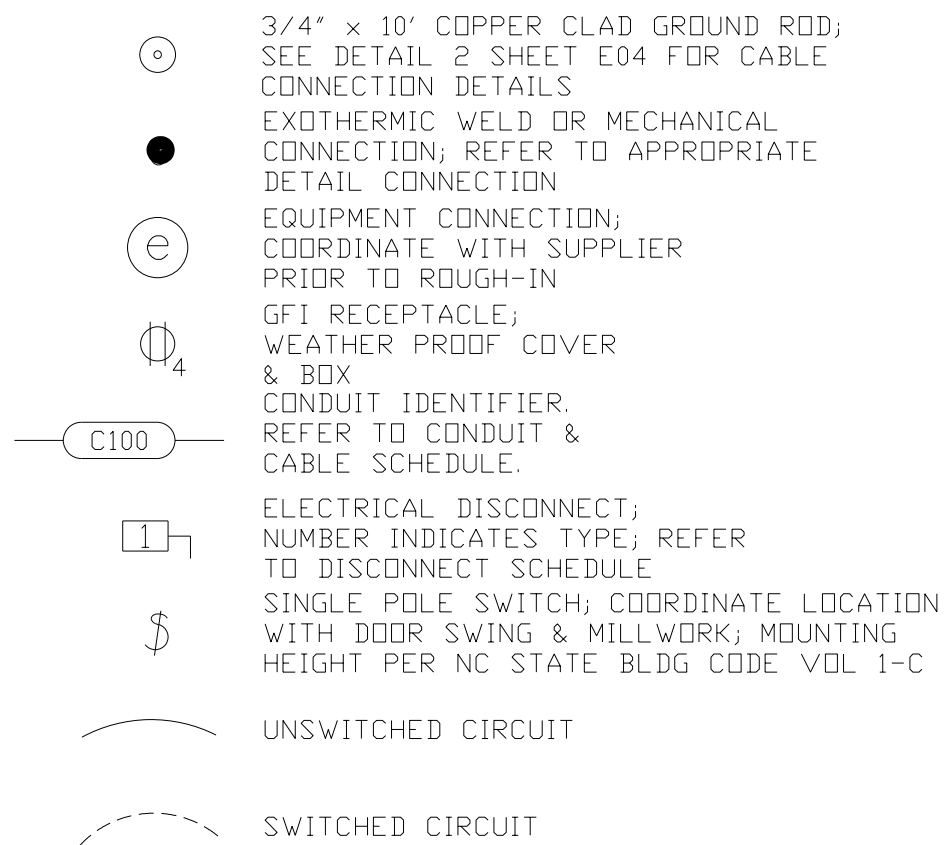
FABRIC	GALV. STEEL OR ALUMINUM COATED STEEL #11 GAGE		
FRAME COMPONENTS	GALVANIZED STEEL		
SYSTEM	G1	G2	G3
LINE POST	2.375" O.D. STEEL PIPE	1.625" X 1.875" STEEL H	1.625" X 1.875" STEEL R.F.
TERMINAL POST (END, CORNER, BRACE)	2.875" O.D. STEEL PIPE	2.875" O.D. STEEL PIPE	2.875" O.D. STEEL PIPE
GATE POST UP THRU 6' LEAF	2.875" O.D. STEEL PIPE	2.875" O.D. STEEL PIPE	2.875" O.D. STEEL PIPE
GATE POST UP THRU 12' LEAF	4.000" O.D. STEEL PIPE	4.000" O.D. STEEL PIPE	4.000" O.D. STEEL PIPE
BRACE RAIL	1.660" O.D. STEEL PIPE	1.660" O.D. STEEL PIPE	1.250" X 1.825" STEEL R.F. OR 1.660" O.D. STEEL PIPE

ALLOWABLE COMPONENTS FOR FENCE SYSTEM

- NOTES:
1. **H IS HEIGHT OF FENCE. REQUIRED HEIGHT IS 6 FEET.
 2. ROLL FORMED LINE POST MAY BE DRIVEN TO A MINIMUM OF 3'-0" IN LIEU OF CONCRETE ANCHOR, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 3. CAPS ARE REQUIRED ON PIPE POST. CAPS ARE NOT REQUIRED ON "H" POST OR ROLL FORMED POST. INSTALL FENCE FABRIC ON THE SIDE FARTHEST FROM THE ROAD EXCEPT THAT ON HORIZONTAL CURVES GREATER THAN 3', INSTALL THE FENCE TO PULL AGAINST LINE POST. CONSIDER ALL CHANGES IN DIRECTION OF FENCE LINE OF 30' OR MORE AS CORNERS.
 4. MAXIMUM WIRE SPACING TO BE 6".
 5. MAXIMUM CLEARANCE BETWEEN LOWEST STRAND AND GROUND TO BE 6".
 6. ERECT BRACE RAILS BETWEEN TERMINAL OR GATE POSTS AT INTERVALS NOT EXCEEDING 700' ON TANGENTS OR 350' ON SHORT RADIUS CURVES.
 7. ERECT ADDITIONAL TERMINAL POSTS IF DIRECTED BY THE ENGINEER.
 8. BRACE TERMINAL POSTS FROM BOTH SIDES OF POST.


PS-1 DETAILS

SYMBOLS



DRAWING SCHEDULE

DRAWING SCHEDULE									
DRAWING NUMBER	DRAWING TITLE	DATE	ISSUE						
			OWNER'S COMMENTS						
			DOT REVIEW						
		02/22/2019	05/06/2019						
UC-54	ELECTRICAL COVER SHEET PS-1		●	●					
UC-55	ELECTRICAL POWER RISER PS-1		●	●					
UC-56	CONDUIT AND CABLE SCHEDULE PS-1		●	●					
UC-57	DETAILS PS-1		●	●					

 M A Engineering Consultants, Inc. 598 East Chatham Street Phone: 919.297.0220	NC License: F-0160 Cary, NC 27511 Fax: 919.297.0221	PROJECT REFERENCE NO. R-2582A	SHEET NO. UC-54
	Suite 137 Phone: 919.297.0220	DESIGNED BY: REF DRAWN BY: REF CHECKED BY: REF APPROVED BY: REF REVISED: NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	(Seal of the North Carolina Professional Engineer, License No. 177, Reese E. Finn)

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

ENERGY CODE INFORMATION

Electrical System and Equipment

Method of Compliance: Prescriptive

Lighting Schedule

- Lamp type required in fixture – See Fixture Schedule
- Number of lamps in fixture – See Fixture Schedule
- Ballast type used in fixture – See Fixture Schedule
- Number of ballasts in fixture – See Fixture Schedule
- Total wattage per fixture – See Fixture Schedule
- Total interior wattage specified vs. allowed – N/A
- Total exterior wattage specified vs. allowed – 78.6 lumens/watt specified vs. 45 lumens/watt allowed

Equipment schedules with motors (not used for mechanical systems)

- Motor horsepower – N/A
- Number of phases – N/A
- Minimum efficiency – N/A
- Motor type – N/A
- # of poles – N/A

Designer Statement:

To the best of my knowledge and belief, the design of this building complies with the electrical system and equipment requirements of North Carolina International Energy code

Signed: _____

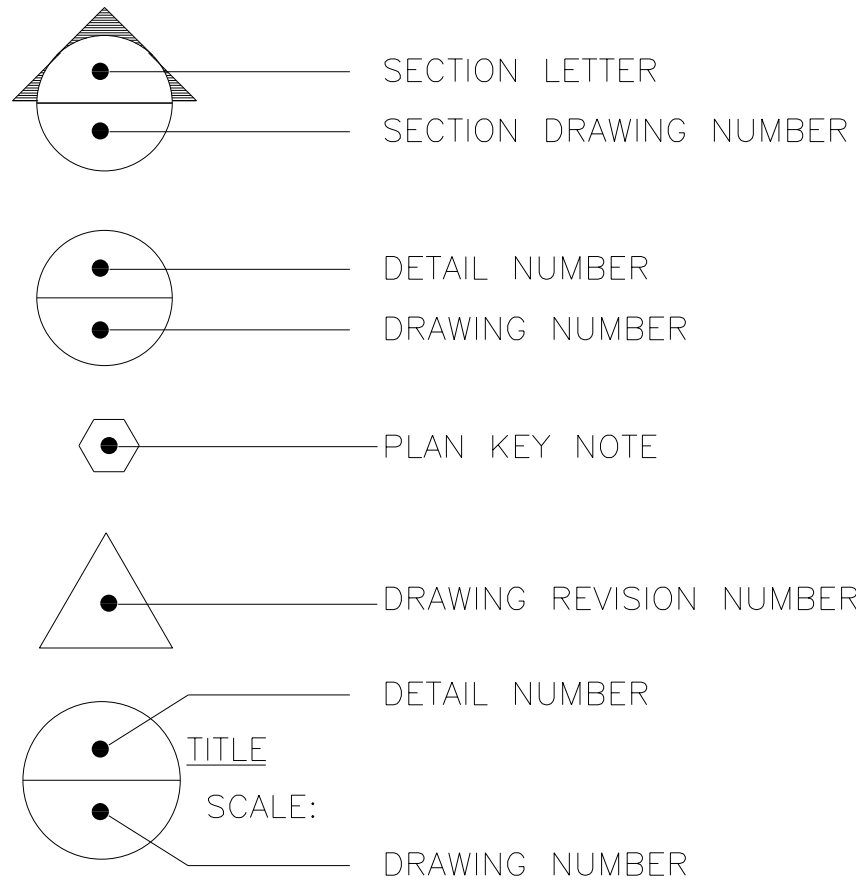
Name: REESE E. FINN

Title: Engineer

LIGHT FIXTURE SCHEDULE

LIGHT FIXTURE SCHEDULE						
ID	DESCRIPTION	LAMP/ QTY	BALLAST/ QTY	VOLTS	WATTS	NOTES
A	LITHONIA EIS 2 54T5HO	25HO 54W 2	GEB 1	120	108	ENCLOSED & GASKETED FLOURESCENT STRIP. WET LABEL. SURFACE MOUNTED. CONTRACTOR TO FURNISH & INSTALL.

MISC. DWG. SYMBOLS



NOTE TO REVIEWER

NOTE TO REVIEWER

THIS APPLICATION IS TO PROVIDE UTILITY POWER, EMERGENCY GENERATOR BACK-UP, AND CONTROL WIRING FOR A RELOCATED PUMPING STATION.

8/17/99

M A Engineering Consultants, Inc.

598 East Chatham Street
Phone: 919.297.0220

Suite 137
Cary, NC 27511
Fax: 919.297.0221

NC License: F-0160

Designed by: **Russ Fink**

Checked by: REF

Approved by: REF

Revised:

Professional Engineer

177

North Carolina
Department of
Transportation
Utilities Engineering Section
Phone: (919) 707-6690
Fax: (919) 250-4151

5/6/2019

UTILITY CONSTRUCTION PLANS ONLY

PROJECT REFERENCE NO.
R-2582A

SHEET NO.
UC-55

DESIGNED BY: REF

DRAWN BY: REF

CHECKED BY: REF

APPROVED BY: REF

REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SECTION

PHONE: (919) 707-6690

FAX: (919) 250-4151

5/6/2019

UTILITY CONSTRUCTION PLANS ONLY

UTILITY CONSTRUCTION

DOCUMENT NOT CONSIDERED FINAL
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1 ELECTRICAL POWER RISER
UC-55 SCALE: N.T.S.

GENERAL NOTE:

THE CONDUIT ROUTING IS DIAGRAMMATIC. REFER TO CONDUIT & CABLE SCHEDULE FOR SIZE & CABLE CONTENT. THE EXACT ROUTING AND COORDINATION WITH SITE CONDITIONS IS THE CONTRACTORS RESPONSIBILITY.



Keyed Notes:

- 1 APPROVED MECHANICAL GROUNDING LUG.
- 2 40 KW DIESEL GENERATOR WITH BASE MOUNTED FUEL TANK, WEATHER/NOISE ENCLOSURE. MAIN BREAKER, SIX WINDINGS. 240 VAC 3Ø.
- 3 SUB-PANEL SUPPLIED WITH AND LOCATED IN SEWAGE LIFT STATION ENCLOSURE. COORDINATE WITH EQUIPMENT SUPPLIER.
- 4 UTILITY METER. COORDINATE LOCATION AND TYPE WITH UTILITY.
- 5 3P NEMA 3R DISCONNECT WITH SOLID NEUTRAL AND GROUND. SE RATED.
- 6 ASCO 300 SERIES (260-400 AMPERE) "J" FRAME AUTOMATIC TRANSFER SWITCH.

VOLTAGE: 230 AMPS: 200 AIC: 12,158		PANEL MDP												MAIN BREAKER: M.L.O. PHASE: 3 WIRE: 4 MOUNTING SURFACE		
		PHASE LOADS														
CKT	DESCRIPTION	C	W	P	CB		A	B	C	VA	CB	P	W	C	DESCRIPTION	CKT
1	PANEL PS	1-1/2	1/0	3	150	13034	13214			180	20	1	12	1/2	RECEPTACLE	2
3				3	150	12154		12154							HI-LEG	4
5				3	150	13234			15154	1920	20	1	12	1/2	LIGHTS	6
7	RECEPTACLE	1/2	12	1	20	180	480			300	15	1	14	1/2	FLOW METER	8
9	HI-LEG							0							HI-LEG	10
11									0							12
13								0								14
15									0							16
17										0						18
19								0								20
21									0							22
23										0						24
25								0								26
27									0							28
29									0							30
							VA/PHASE: 13694 12154 15154			NEC LOAD: 45666						
							TOTAL VA: 41003			AMPS: 115						
							TOTAL AMPS: 103									
							NEC LOAD/ PHASE: 15089 13549 17029									
NOTES: 1. PROVIDE BOLT-ON BREAKERS 2. SQUARE D NOOD																

VOLTAGE: 230 AMPS: 125 AIC: 10 K		PANEL PS												MAIN BREAKER: M.L.O. PHASE: 3 WIRE: 4 MOUNTING SURFACE		
		PHASE LOADS														
CKT	DESCRIPTION	C	W	P	CB		A	B	C	VA	CB	P	W	C	DESCRIPTION	CKT
1	15HP PUMP	1	6	3	80	5577	11154			5577	20	3	6	1	15HP PUMP	2
3				3	80	5577		11154		5577		3				4
5				3	80	5577			11154	5577		3				6
7	INTERIOR LIGHT	1/2	12	1	20	200	380			180	20	1	12	1/2	RECEPTACLE	8
9	HI-LEG							0							HI-LEG	10
11	CONTROLS	1/2	14	1	15	300			480	180	20	1	12	1/2	RECEPTACLE	12
13	SPACE HEATER	1/2	12	2	20	250	1250			1000	15	3	14	1/2	POWER TRANSFORMER	14
15	HI-LEG							1000		1000	15					16
17	AIR PUMP	1/2	14	1	15	250			1250	1000	15					18
19	AIR PUMP	1/2	14	1	15	250	250									20
21	HI-LEG							0							HI-LEG	22
23	EXHAUST FAN	1/2	14	1	15	350			350							24
25							0									26
27	HI-LEG							0							HI-LEG	28
29									0							30
31							0									32
33	HI-LEG							0							HI-LEG	34
35									0							36
37								0								38
39	HI-LEG								0						HI-LEG	40
41																42
							VA/PHASE: 13034 12154 13234			NEC LOAD: 44000						
							TOTAL VA: 38423			AMPS: 110						
							TOTAL AMPS: 96									
							NEC LOAD/ PHASE: 14429 13549 16023									
NOTES: 1. PANEL PROVIDED BY ENCLOSURE SUPPLIER.																

PS - 1 ELECTRICAL

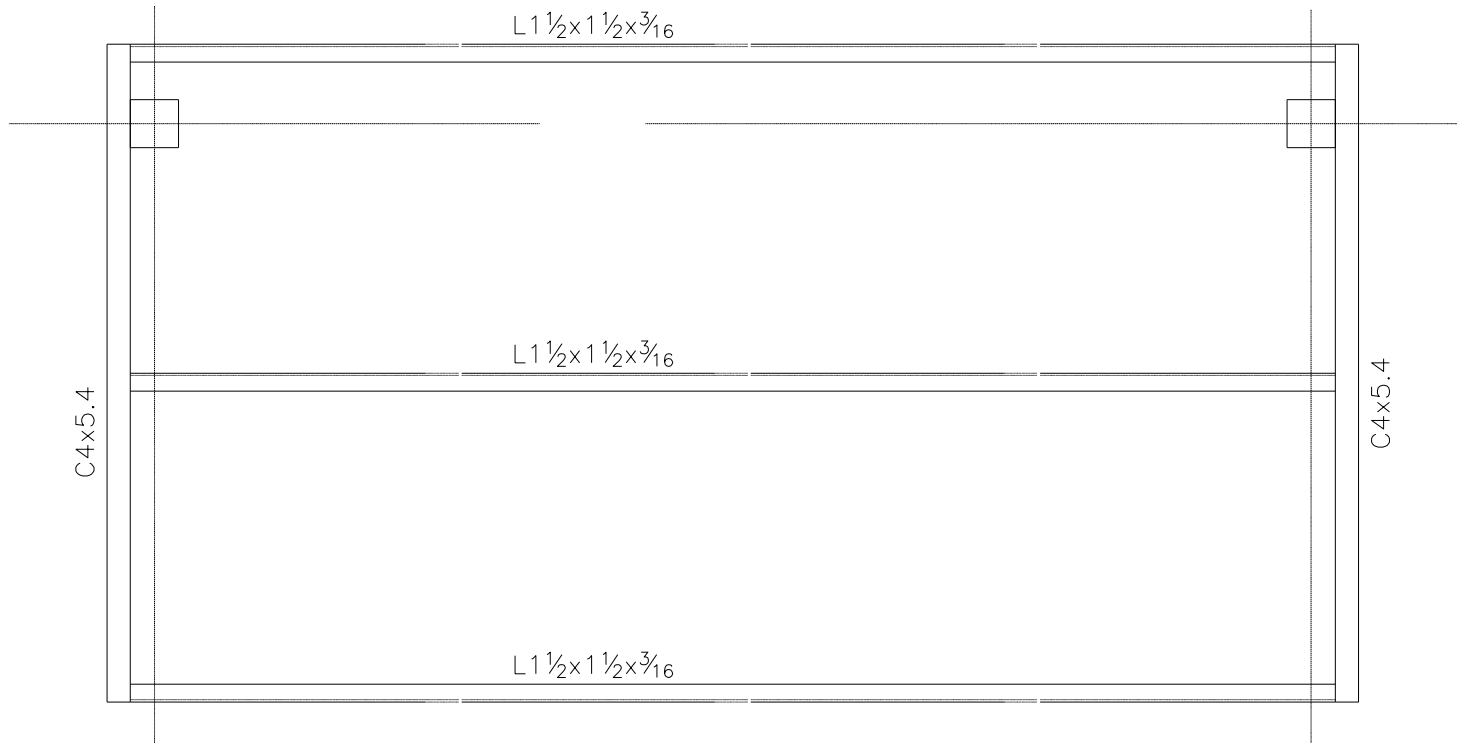
 <p>M A Engineering Consultants, Inc.</p> <p>598 East Chatham Street Suite 137 Cary, NC 27511 Phone: 919.297.0220 Fax: 919.297.0221</p>	<p>PROJECT REFERENCE NO.</p> <p><i>R-2582A</i></p>	<p>SHEET NO.</p> <p><i>UC-57</i></p>
	<p>DESIGNED BY: REF</p>	
	<p>DRAWN BY: REF</p>	
	<p>CHECKED BY: REF</p>	
	<p>APPROVED BY: REF</p>	
	<p>REVISED:</p>	
<p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION</p>	<p>5/6/2019</p>	<p>UTILITY CONSTRUCTION PLANS ONLY</p>
<p>UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151</p>		

UTILITY CONSTRUCTION

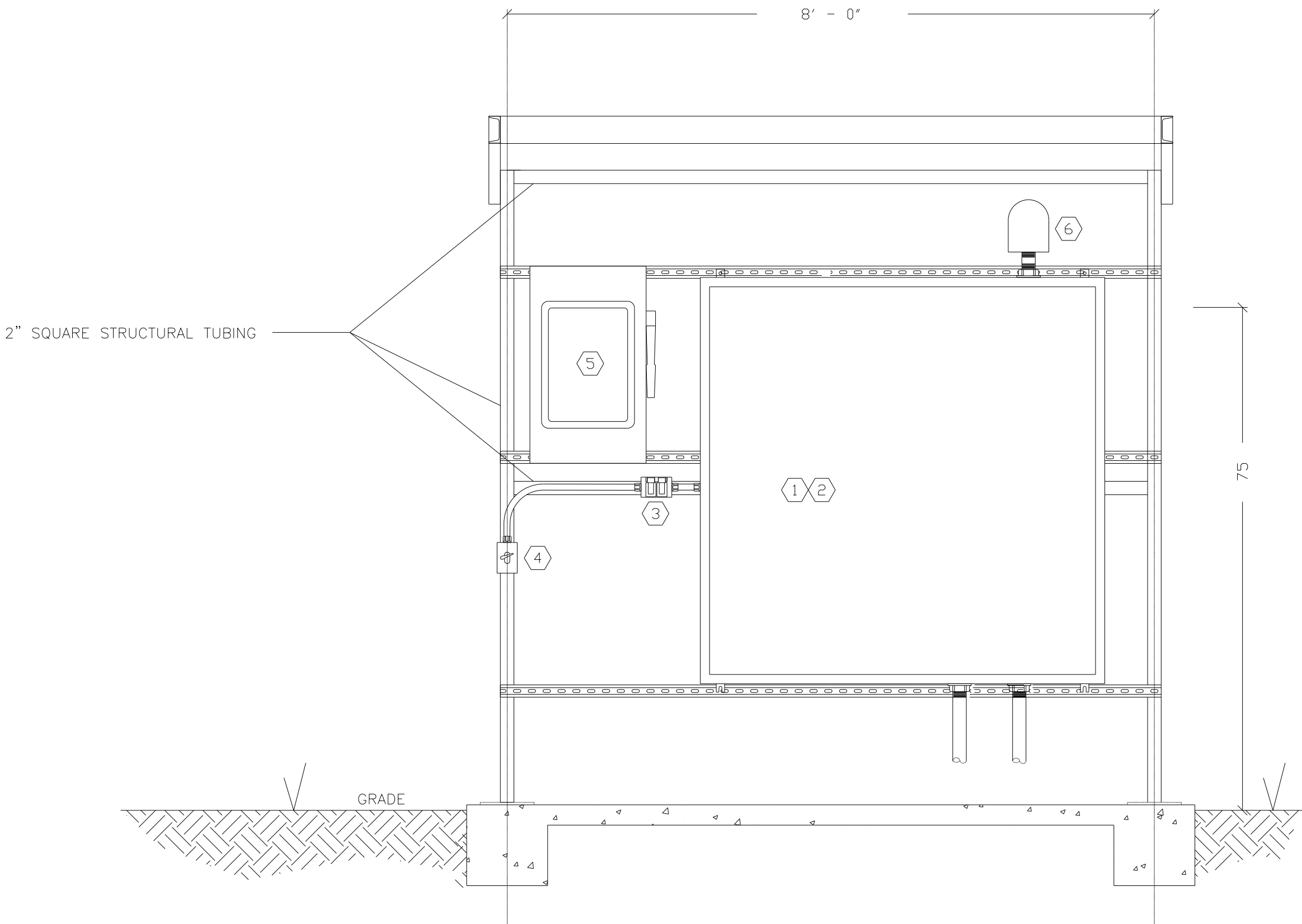
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Keyed Notes:

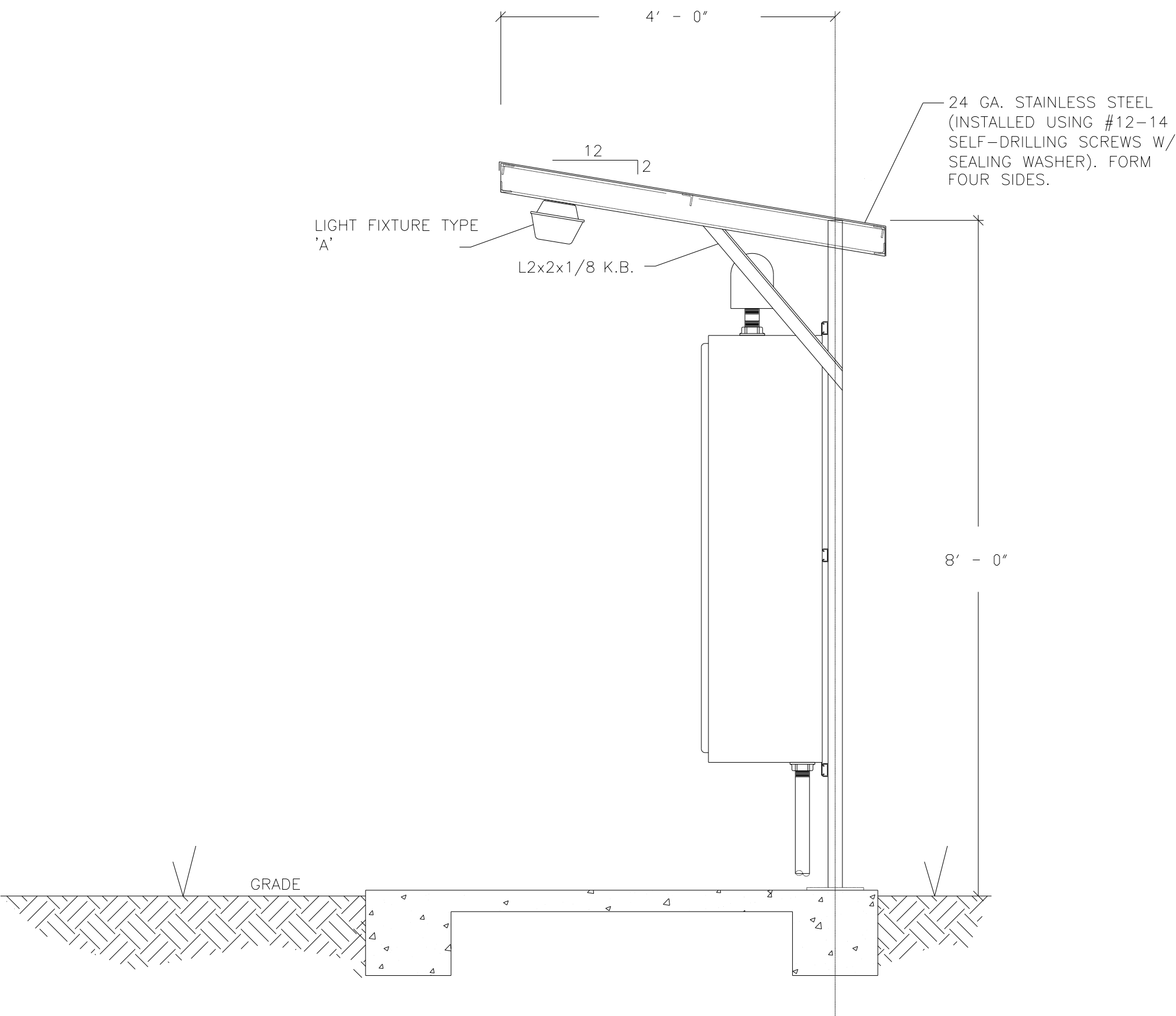
- ① 60x60x12 NEMA 3R CONTROL CABINET. PROVIDE BACK PANEL AND LOCKING HANDLE.
- ② MOUNT ATS, MDP, FLOW METER CONTROL UNIT, AND MISC. CONTROL UNITS. SIZE IS NOMINAL. CONFIRM SPACE REQUIREMENTS WITH EQUIPMENT SUPPLIERS.
- ③ GFI RECEPTACLE WITH IN-USE COVER.
- ④ SP SWITCH WITH WP COVER. CONTROLS CANOPY LIGHT.
- ⑤ 3P NEMA 3R DISCONNECT WITH SOLID NEUTRAL AND GROUND. SE RATED.
- ⑥ WARMA FLASHING RED LED WARNING LIGHT. COORDINATE WITH CONTRLS VENDOR.



3 SERVICE CANOPY PLAN VIEW
UC-57 SCALE: 3/4" = 1'-0"



1 SERVICE CANOPY FRONT ELEVATION
UC-57 SCALE: 3/4" = 1'-0"



2 SERVICE CANOPY SIDE ELEVATION
UC-57 SCALE: 3/4" = 1'-0"